

ABUSED WOMEN'S PERCEPTIONS OF HEALTH
BEFORE AND AFTER SEEKING HELP AT A
POLICE DEPARTMENT

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To the Associate Vice President for Research and Dean of the Graduate School:

I am submitting herewith a dissertation written by

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entitled Abused Women's Perceptions of Health Before and After

Seeking Help at a Police Department

I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Nursing.

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DEDICATION

to my three daughters

Alexia, Catherine, and Marianna

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ABSTRACT

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This study describes how intimate partner violence (IPV) affects abused women's health and their perceptions of health before and after seeking help at a police department regarding the IPV in their lives. A descriptive, longitudinal, repeated-measures design was employed to examine the hypothesis that there would be a change over time in the health perceptions of abused women who go to a police department with the intent to file assault charges (helpseeking) against an intimate partner.

A consecutive sample of 90 abused women attempting to file charges and meeting study criteria was obtained during a 35-day period. The Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) was used to assess the women's health perceptions for the 3-months prior to seeking help and was readministered at three and six months following helpseeking. Mean scores were calculated for each of the eight SF-36 scales at the three separate time intervals and a multivariate approach one-way repeated-measures analysis of variance (ANOVA) tested the hypothesis. Internal consistency reliability of the SF-36 was estimated by calculation of Cronbach's alpha for the eight scales of the instrument.

Of the 90 abused women who were interviewed at time of helpseeking, 87 were available at three months (97%) and 83 were available at six months for a 92% final retention rate. The data analysis revealed this sample of abused women reported poor physical and mental scores on the SF-36 at time of helpseeking. Over time, perceptions of health did significantly improve for the scales of Bodily Pain ($F_{2,81}=27.58, p<.0005$), Vitality ($F_{2,81}=13.21, p<.0005$), Social Functioning ($F_{2,81}=8.17, p=.001$), Emotional Role Performance ($F_{2,81}=16.85, p<.0005$), and Mental Health ($F_{2,81}=25.33, p<.0005$). For these five scales, perceptions of health improved significantly both at three and six months after helpseeking. Adequate reliability of the SF-36 with the abused women was demonstrated.

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CHAPTER 1

INTRODUCTION

The battering of women by intimate partners is a serious health problem in the United States. Women are six times more likely than men to suffer violence at the hands of a partner or an ex-partner than from a stranger (Bachman & Saltzman, 1995). Between one and four million women are physically assaulted by their intimate partners each year (Straus & Gelles, 1986). In 1996, women accounted for approximately 85% of the victims of all intimate partner violence (Greenfeld et al., 1998). Approximately 840,000 women were raped, robbed, and assaulted (sexual, aggravated, and/or simple) by an intimate partner. An additional 1,326 women were murdered by an intimate partner. Among murder victims for every age group, females are much more likely than males to have been murdered by an intimate (Cooper & Eaves, 1996).

Abused women suffer from physical trauma, report more physical symptoms, and are more frequent users of emergency departments and medical care services (Bergman & Brismar, 1991; McCauley et al., 1995). Women account for 84% of patients treated in hospital emergency departments for injuries inflicted by intimate partners (Greenfeld et al., 1998). Studies indicate that abused women are more likely to experience chronic pain (Chapman, 1989; Haber, 1985). Battered women have higher rates of depression, anxiety, psychoses, low self-esteem and attempted suicide (Amaro, Fried, Cobral, & Zuckerman,

1990; Bergman & Brismar, 1991; McCauley et al., 1995; Saunders, Hamberger, & Hovey, 1993).

Further compounding the problem is the fact that women are also physically abused during pregnancy (Helton, McFarlane, & Anderson, 1987; McFarlane, Parker, Soeken, & Bullock, 1992). These battered women suffer more complications of pregnancy (McFarlane, Parker, & Soeken, 1996; Parker, McFarlane, & Soeken, 1994). When battered women are with partners that abuse alcohol and drugs, they also tend to abuse alcohol and drugs when they are with these partners (McCauley et al., 1995). Abused women tend to have no medical insurance nor do they receive medical assistance. They often lack social support, are socially isolated, and have financial and housing difficulties (Forte, Franks, Forte, & Rigsby, 1996; McCauley et al., 1995; Sullivan, Tan, Basta, Rumptz, & Davidson, 1992). In general, abused women's perceptions of their health are significantly worse than those of non-abused women (Jaffe, Wolfe, Wilson, & Zak, 1986; Wagner & Mongan, 1998). Furthermore, between the years 1992 to 1996, intimate partner violence cost female victims nearly \$150 million a year due to medical expenses from the physical trauma, broken or stolen property, and lost pay (Greenfeld et al., 1998).

When trying to end the violence in their lives, abused women seek help from a variety of sources including the police, health care professionals, lawyers, clergy, social services agencies, women's groups, friends, and family. The most commonly accessed resource for battered women is the police (Gondolf, 1988; Hutchison & Hirschel, 1998;

McFarlane, Soeken, Reel, Parker, & Silva, 1997). Approximately half of the intimate partner violence incidents experienced by women are reported to the police (Greenfeld et al., 1998). When abused women contact the police, studies have shown that the intimate partner violence can increase or decrease (Hart, 1993; Wiist & McFarlane, 1998). While data exists on the violence that occurs towards women, what is not known is the health status of abused women who seek help with the police or law enforcement agency. Past studies that have focused on abused women and their perceptions of health have been conducted either in health care settings or in battered women's shelters and are unrelated to seeking help from the police. There are no reported studies on the health perceptions of abused women who have contacted the police.

Problem of Study

Abused women suffer from the violence in their lives. Because many abused women attempt to end the violence in their lives by contacting the police, this study was designed to investigate the abused women's perceptions of health before and after seeking help at a police department. Contacting the police is a common cry for help from battered women. What is not known about these women are their health perceptions before and after seeking help to end the violence.

Rationale for Study

The purpose of this study is to increase understanding of abused women's perceptions of health before and after seeking help at a police department. While research

has shown that abused women suffer physically and mentally and that these women seek help to improve their lives, what is not known are perceptions of health of abused women who seek help to end the violence and the health outcomes of the helpseeking behavior. Nursing research is necessary in examining the perceptions of health of abused women for several reasons. First, a study of abused women and their perceptions of health would increase the body on knowledge on how the intimate partner violence affects the physical, mental, and social aspects of their lives. This study plans to investigate how abused women perceive their health during the crucial decision making process to contact the police, as well as what happens after the decision is made.

Standard protocol in most health care institutions when treating victims of intimate partner violence includes referrals to various community agencies including law enforcement (Campbell & Sheridan, 1989; Tilden, 1989). It is not known whether or not contacting law enforcement makes a difference in abused women's health perceptions. Nursing research is necessary to determine the perceived health outcomes of seeking help at a police department and this study will examine these outcomes. The best measure of a perceived health outcome is how closely the result of the helpseeking behavior approaches the woman's objectives of reducing and/or ending the intimate partner violence. This research will shed light on the perceived health outcomes of abused women who seek help at a police department.

Conceptual Framework

The conceptual framework for this research was based on Ware's conceptual framework of perceived health status or perceived well-being (Ware, 1987; Ware & Sherbourne, 1992). According to Ware, a senior scientist and medical outcomes researcher with the New England Medical Center, perceived health is defined in terms of "self-reports of the frequency and intensity of feeling states including general mental health (psychological distress and psychological well-being), bodily pain, and vitality (energy and fatigue)" (Ware, 1993, p. 3:2). Perceived health is subjective and refers to how an individual feels; a psychological state that cannot be completely inferred from observable behavior (Ware, 1993).

Ware has investigated perceptions of health to evaluate the effectiveness of health care interventions and to improve provider decision making (Ware, Brook, Davies, & Lohr, 1981). Traditionally, effectiveness of health care, also referred to as outcomes of health care, has been measured in terms of physiological phenomena. For example, lowered blood pressure would be seen as an appropriate outcome for antihypertensive drug therapy. However, Ware's conceptual framework challenges the traditional medical research model and places the patient's or individual's point of view foremost in defining and monitoring health care outcomes. Ware stated that health care researchers must consider assessing individuals' symptoms, functioning, and health-related quality of life in evaluating outcomes of care. Health care should be based not just on its impact on morbidity and mortality, but also on how individuals feel it affects their life.

Ware and his colleagues (Ware & Sherbourne, 1992; Ware, 1993) defined and refined the conceptual framework based on the data collected from the Medical Outcomes Study (MOS) at the New England Medical Center in Boston and the Rand Corporation in Santa Monica, California (Stewart et al., 1989). This study evaluated the functioning and well-being of 9,385 adults at the time of office visits to 362 physicians in three cities. The MOS produced comprehensive health surveys that assessed forty physical and mental health concepts. Based on these concepts, perceived health status was defined as being comprised of eight health domains: (a) physical functioning, (b) physical role functioning, (c) bodily pain, (d) general mental health, (e) vitality, (f) social functioning, (g) emotional role functioning, and (h) general health perceptions. A detailed explanation of each domain follows.

Physical Functioning

The domain of physical functioning is defined as the capacity to perform a variety of physical activities and represents various levels and kinds of physical limitations an individual may encounter in daily life. The ability to lift and carry groceries, climb stairs, bend, kneel, stoop, or walk moderate distances are taken into consideration when defining physical functioning (Stewart et al., 1989; Ware, 1993).

Role Functioning-Physical and Emotional

Role functioning is defined as the degree to which an individual performs or has capacity to perform usual daily activities such as work, housework, and/or school

(Stewart et al., 1989). This concept examines problems an individual might have accomplishing less or cutting down on the amount of time spent on activities due to physical and/or emotional health.

Bodily Pain

The concept of bodily pain refers to the actual bodily pain, including intensity, duration, and extent of interference with normal activities, an individual may be experiencing (Ware, 1993). As with the other health perception domains, this domain is based on the individual's perception of pain.

General Mental Health

The general mental health domain is defined as general mood or affect, including depression, anxiety, and positive well-being (Ware, 1993). Feelings of nervousness, peacefulness, happiness, and serenity are included in this definition.

Vitality

The concept of vitality includes encompasses the themes of energy level and fatigue, as well as subjective well-being (Ware, 1993). Ware and Sherbourne (1992) indicated this concept is especially crucial when examining the impact of medical care and treatment on perceptions of health.

Social Functioning

Social functioning is the ability to develop, maintain, and nurture mature social relationships, including family, friends, neighbors, marital functioning, and sexual functioning (Ware, 1993). This domain refers to the extent to which physical or emotional health interferes with normal social activities such as visiting with friends and family or participating in group activities (Stewart et al., 1989). In contrast to the physical and mental health concepts, the social functioning domain includes both the quantity and quality of social activities.

General Health Perceptions

This broad concept, general health perceptions, consists of the beliefs and evaluations of a person's overall health, including current and prior health, health outlook, and resistance to illness (Ware, 1993). For example, perceptions that one's health may deteriorate or perceptions that one's health is excellent are examined in this domain.

Based on this conceptual framework of perceptions of health, there are three possible outcomes of abused women's helpseeking behavior. Although nursing and other health care providers encourage abused women to seek help through the criminal justice system to end the violence and trauma in their lives, this research may find that perceptions of health do not change after attempting to file assault charges. Another possible outcome of helpseeking is that the abused women's perceptions of health worsen after seeking help. A third outcome of helpseeking at the police department is that the perceptions of health improve over time.

For this study, the theoretical propositions to be examined were: (a) abused women seek help because the violence in their lives is affecting their health, and (b) if abused women seek help due to violence that is affecting their health, then perceptions in health will change after helpseeking.

Assumptions

The following assumptions are based on Ware's (1987, 1993) conceptual framework of perceived health status and underlie this study:

1. Intimate partner violence results in suffering that impacts perceptions of health.
2. An abused woman is qualified to evaluate her current health status and expectations for health in the future.
3. An abused woman is usually the best judge of whether or not her goals of improved health are met.
4. A desire to obtain a better life and to preserve functioning and well-being enable abused women to seek help.

Research Hypothesis

The purpose of this study is to examine abused women's perceptions of health before and after attempting to file charges against an intimate partner at a police department (helpseeking). The research hypothesis is: There will be a change over time in health perceptions of abused women who helpseek at a police department. The dependent

variables for the hypothesis are scores on a health perception instrument over time. Health perceptions will be measured at time of helpseeking and three and six months after helpseeking.

Definitions of Terms

The following terms were defined for the purpose of this study:

1. Battered/abused woman is conceptually defined as a female who is subjected to repeated, deliberate physical, mental and/or sexual assault within a context of coercive control (Campbell & Parker, 1992). A battered/abused woman is operationally defined as a woman who presents to the Family Violence Unit with a complaint of intimate partner violence.
2. Intimate partner is conceptually defined as that person one is in a relationship with; the relationship could be legal (marriage) or common-law marriage as well as living together or exclusive dating arrangement (Sev'er, 1997). For the purpose of this study, an intimate partner is defined as a spouse/common-law spouse, ex-spouse/ex-common-law spouse, girlfriend/boyfriend, ex-girlfriend/ex-boyfriend, same-sex partner, ex-same-sex partner, and estranged partner as indicated on the demographic data form (see Appendix A).
3. Helpseeking is conceptually defined as an attempt to do something to end the intimate partner violence (Gondolf, 1988). Operationally defined, helpseeking is the attempt to file assault charges against an intimate partner at the police department.

4. Health perceptions are conceptually defined as being comprised of eight health domains or phenomena: (a) physical functioning, (b) physical role functioning, (c) bodily pain, (d) general mental health, (e) vitality, (f) social functioning, (g) emotional role functioning, and (h) general health perceptions (Ware, 1987; Ware & Sherbourne, 1992). Operationally defined, health perceptions are scale scores measured by the Medical Outcomes Study (MOS) 36-Item Short-Form Health Survey (SF-36) (Ware, 1993) (see Appendix B).

Limitations

Generalizability of the findings of this study may be limited by the demographic attributes of the sample. The location of the study, a police department in an urban area, and the convenience sample of women who attempted to file charges also limits the generalizability. Furthermore, the researcher was unable to control for life crisis events that occurred after helpseeking at the police department. Events such as injuries and illnesses unrelated to intimate partner violence, pregnancy and/or birth of a child, death of a family member or friend, or change in employment and financial status can influence a woman's perceptions of health.

Summary

This study will examine abused women's perceptions of health before and after attempting to file charges against an intimate partner at a police department. This study will test the hypothesis: There will be a change over time in health perceptions of abused women who helpseek at a police department. The study of health perceptions of abused women is important because the data may provide information about the health outcomes of seeking help at a police department. Abused women are often referred to a police department when trying to end the violence in their lives. Nurses, as well as other health care providers, need to know what the health outcomes are after helpseeking at a police department. This study will provide information to assist nurses in delivering the most appropriate care to abused women.

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this review was to examine the literature related to the health perceptions of abused women and their helpseeking behaviors. The review of literature was organized according to the following categories: health and health perceptions of abused women, helpseeking of abused women, and the outcomes of helpseeking by abused women.

Health and Health Perceptions of Abused Women

Several published literature reviews document that the health status of abused female patients has been well researched (Campbell & Lewandowski, 1997; Campbell & Parker, 1992; Plichta, 1992). However, in measuring health status of abused women, the literature does not always distinguish between actual health status and perceived health status. In fact, a careful review of the literature would reveal that many health status studies utilize instruments that rely on the participants' reports of health status, subjective symptomatology, and/or their perceptions of health status. Therefore, this review of literature compiled those health studies that examined the health of abused women from the self-reports of health and/or perceptions of health of the women. Most of the data for these studies have been collected in either clinical or shelter settings. To date, there has been no published research conducted in a police department on the health perceptions of

abused women seeking help for the violence in their lives.

There has been one published study that used the SF-36 health survey with abused women (Wagner & Mongan, 1998). Using cross-sectional interviews and retrospective medical record reviews, 407 women were administered the Abuse Risk Inventory for Women, the Conflict Tactics Scale, the Wahler Physical Symptom Inventory, and the SF-36 Health Survey in a clinical setting. The study specifically analyzed the data between emotionally abused and nonabused women in three areas: (a) symptoms, (b) medical services utilization, and (c) health status. Emotionally abused women reported significantly greater symptom experience including difficulty sleeping, difficulty losing weight, excessive perspiration, feeling tired, muscular tension, poor health in general, feeling hot or cold regardless of weather, arm or leg aches or pains, shakiness, and swelling of arms, hands, legs, or feet. The emotionally abused women had more medical visits than the nonabused women. Emotionally abused women scored lower than the nonabused women on 7 of the 8 scales of the SF-36; there were no differences in scores for the Physical Functioning scale.

Jaffe et al. (1986) studied the emotional and physical health problems of abused women residing in battered women's shelters in Canada using the General Health Questionnaire (GHQ). This 28-item instrument measures somatic problems, anxiety and insomnia, social dysfunction, and depression. The GHQ requires respondents to indicate the frequency of various symptoms on a 4-point scale that produces scores ranging from 0 (no symptoms) to 84 (extreme symptomatology). The GHQ scores from the sample of

abused women was then compared with GHQ scores from a group of women in the community matched for family income, length of marriage, and number of children. The results indicated that abused women report a significantly higher level of somatic complaints, anxiety, and depression.

Another study also used the GHQ in examining the impact of sexual and physical abuse on women's health (Mullen, Romans-Clarkson, Walton, & Herbison, 1988). A random sample of 2000 women living in New Zealand was mailed the GHQ. A subsample of the women who responded to the initial GHQ were stratified to include more with poor GHQ scores and then randomly selected for in-home interviews. These interviews contained questions regarding sexual and physical abuse. Results of the two-way analysis of variance indicated that battered women had significantly higher scores (poor health) on the GHQ at 4.96 ($p < .01$) as well as poor scores on a psychiatric status instrument, the Present State Examination (PSE) at 7.36 ($p < .001$).

In order to assess the perceived health needs of abused women living in women's shelters in Calgary, Canada, Dobbie and Tucker (1990) surveyed a convenience sample of abused women. All of the 80 women completing the health self-assessment had unmet health needs in all aspects of their health prior to entering the shelter. Regarding nutrition and eating habits, 80.2% sometimes or almost never had three meals per day and 78% had less than 4 or 5 servings of fruit and vegetables. The majority of women almost never engaged in vigorous exercise (61.5%) or participated in recreational sports (65.9%). Sleep patterns were also poor for the abused women with only 23% sleeping soundly and

12% waking up feeling fresh and rested. Fifty-five percent of the women smoked and 57% avoided street drugs. Social support and relationships with others were limited with only 22% of the women being able to rely on extended family for support and 51.6% receiving support from a friend. The abused women complained of a variety of medical problems including; (a) being overweight, 67%; (b) allergies, 34.5%; (c) stress-related illness, 18%; (d) upper respiratory infection, 11%; (e) heart and circulation problems, 7%; (f) depression, 3.6%; and (g) bladder and yeast infections, 5.4%.

McCauley et al. (1995) reported on the prevalence of battering in 1952 female patients seen in four primary care practices and the clinical characteristics associated with battering. A self-administered instrument was developed and included approximately 85 questions on physical and sexual abuse, alcohol abuse, emotional status, physical symptoms, use of street and prescription drugs, and medical and psychiatric history. Of the total sample, 5.5% of the women had experienced intimate partner violence (IPV) in the past year and 21.4% had experienced IPV sometime in their adult lives. Women currently experiencing IPV were more likely to be (a) younger than 35 years of age; (b) single, separated, or divorced; (c) receiving medical assistance or to have no insurance; (d) reporting more physical symptoms; (e) measuring higher scores on instruments for depression, anxiety, somatization, and low self-esteem; (f) with a partner that abuses drugs or alcohol; (g) abusing drugs or alcohol themselves; (h) more likely to have attempted suicide; and (i) more frequent users of emergency departments.

These findings are very similar to other studies of health problems of battered women. In a longitudinal study, Bergman and Brismar (1991) collected data on 117 battered women from November 1983 to June 1984 and then again in 1989. The study originally identified participants from all women seeking emergency room health care as a result from battering. All 117 abused women identified were offered a treatment program for battered women. Fifty-eight women agreed to enter the program while 59 declined. All identified abused women were compared with a control group regarding consumption of somatic and psychiatric hospital care during the period from 10 years before to 5 years after the battering. These data were obtained from the Stockholm County Council's computer files supplemented with data from medical records. The battered women and the control women were further compared regarding demographic data collected from the population register. Chi square or Fisher's Exact Test were used for intergroup comparisons. Results indicated that the battered women were more likely to (a) use more health care services ($p < .001$), (b) attempt suicide ($p < .001$), (c) suffer from depression ($p < .001$) and psychoses ($p < .01$), (d) suffer from alcoholism ($p < .001$) and drug addiction ($p < .01$), (e) suffer from physical trauma and gynecological and medical disorders ($p < .001$), and (f) be divorced ($p < .001$).

Another clinical study used the Conflict Tactics Scale and female patients' health problems listed in the medical record to identify demographic and health indicators of domestic violence (Saunders, Hamberger, & Hovey, 1993). Categorizing the health problems according to International Classification of Diseases, Ninth Revision (ICD-9)

diagnoses and symptoms, the research found that depression was the strongest indicator of domestic violence. The relationship between battering and depression has been well documented but rarely noted in the depression research literature (Campbell, Kub, & Rose, 1996).

To investigate the problem of abuse in women with chronic pain, Haber (1985) interviewed 150 women who presented to a hospital-based chronic pain center. Fifty-three percent of the women had a history of physical and/or sexual abuse and 78 percent of these women were first abused during marriage. In this sample, 100 percent of the pain complaints followed incidents of abuse.

A study reported by Chapman (1989) examined the frequency of sexual and gynecological dysfunction in 100 women: 30 rape victims, 35 abuse victims, and 30 case-matched controls. A sexual inventory evaluated for sexual fears, sexual desire, sexual arousal, and orgasm. A gynecological examination and interview focused on pain, dyspareunia, vaginismus, dysfunctional uterine bleeding, vaginitis, and pelvic surgery. Results indicated that over a period of two to four years after the violent event, 61 percent of the raped and abused women had sexual dysfunction and gynecological problems. Furthermore, women with a history of abuse and/or assault presented significantly more pelvic pain and surgery.

Help Sources Utilized by Abused Women

When attempting to do something about the violence in their lives, abused women seek help from a variety of sources including the police, health care professionals,

lawyers, clergy, social services agencies, women's groups, friends, and family. The most commonly accessed resource for abused women is the police (Gondolf, 1988; Hutchison & Hirschel, 1998; McFarlane, Soeken, Reel, Parker, & Silva, 1997; Wiist & McFarlane, 1998). About 1 in 10 battered women seek professional medical treatment (Greenfield et al., 1998). Table 1 summarizes the research literature on the helpers or help sources of abused women. Over and over the findings reported that when abused women do reach out for assistance with the violence in their lives, they most often seek help from the police.

Table 1

Summary of Literature on the Helpers/Help Sources of Abused Women

Author/Year	Sample and Setting	Methods/ Instruments	Helpers/ Help Sources	Predictors of Helpseeking
Hutchison & Hirschel, 1998	419 abused women, misdemeanor cases from police department	Interview consisting of 546 potential variables	Police 44.9% Complaint/warrant 35.6% Lawyer 21% Phoned Shelter 19% Counselor 15.9% Phoned Victim Assistance 15.4% Magistrate 13.3% Minister 13.3% Visited Victim Assistance 7.3% Stayed at shelter 6.7% Visited shelter 5.1%	Relationship status, married women helpseek more than cohabitants
Pakieser, Lenaghan & Muelleman, 1998	1652 abused women, emergency departments	12-item questionnaire	Family/friends 71% Police 45% Emergency department 22% Social worker 19% Psychologist/ psychiatrist 15% Lawyer 11% Physician 10% Clergy 10%	

Table 1 continued

Author/Year	Sample and Setting	Methods/ Instruments	Helpers/ Help Sources	Predictors of Helpseeking
Wiist & McFarlane, 1998	329 abused Hispanic prenatal patients, public health clinics	Abuse Screen Community Agencies Assessment Severity of Violence Against Women Scales (SVAWS)	Police 23% Church/clergy 6% Battered woman's group 3% Shelter 3% Social services 1% Legal 1%	
McFarlane, Soeken, Reel, Parker & Silva, 1997	Prospective ethnically stratified sample of 199 pregnant abused women, public prenatal clinics	Abuse Screen Relationship Inventory Index of Spousal Abuse SVAWS	At 6 months: Police 15.1% Other 33.7% At 12 months: Police 14.1% Other 31.2%	Severity of abuse
Hamilton & Coates, 1993	270 abused women, professional and service agencies in Canada	Questionnaire	Physical Abuse: Police 32% Social worker 31% Physician 28% Clergy 26% Crisis counselor 20% Other 20% Lawyer 19% Psychiatrist 15% Psychologist 14% Nurse 10%	Contact with services more likely to occur regarding emotional abuse and least likely to occur concerning sexual abuse

Table 1 continued

Author/Year	Sample and Setting	Methods/ Instruments	Helpers/ Help Sources	Predictors of Helpseeking
Hamilton & Coates, 1993 (continued)			Emotional abuse: Social worker 33% Physician 26% Clergy 24% Crisis counselor 20% Police 20% Psychiatrist 18% Lawyer 17% Other 16% Psychologist 15% Nurse 11%	
Reidy & Von Korff, 1991	289 abused women, battered women's agencies	self- administered questionnaire	Health care providers 22% Police 20% Courts 16%	
Limandri, 1985	40 abused women, responded to study advertisements distributed in community	interview	Last attempt to reach out for help: Health care providers 35% Friends 20% Abused woman's organization 15% Law official 12.5% Family 5% Clergy 5% Self-help group 5%	To seek some specific intervention for self (i.e. health care, restraining order)

Outcomes of Helpseeking

There have been very few studies on outcomes of abused women's health after seeking help at a law enforcement agency. Most studies on the outcomes of helpseeking of abused women have been conducted with shelter or clinical populations.

The National Institute of Justice sponsored one of the only published reports of perceived health after seeking help at a criminal justice agency (Keilitz, Hannaford, & Efke, 1997). The purpose of this study was to (a) examine the civil protection order process in three jurisdictions (Delaware, Denver, and District of Columbia), (b) evaluate the benefits of protection orders in the context of the women's experiences, and (c) measure the women's perceptions of effectiveness of protection orders. Women were recruited from female petitioners for protection orders in the three-project sites one month after they received a protection order. Initial telephone interviews were conducted with 285 women. Follow-up interviews were conducted about six months later with 177 of the same group of women. The women's perceptions of effectiveness was measured by two instruments: the Well-Being Index which measures quality of life and the Problem Index which measures extent of the abuse and other problems related to the protection order.

Results of the study on perceived effectiveness indicated at the initial interview, which was conducted one month after receiving the protective order, 72.3% of the women felt their life improved, 72.3% felt better, and 73.7% felt safer. At the 6-month follow-up interview, 85.3% of the women felt their life improved, 92.7% felt better, and

80.5% felt safer. The study concluded that civil protection orders are valuable for assisting abused women in regaining a sense of well-being.

Within the battered woman's shelter setting, one longitudinal study examined various perceptions of abuse women, including their perceptions of mental health, after helpseeking at a shelter. Sullivan and colleagues (1992) evaluated a 10-week intervention program designed to provide postshelter advocacy services to abused women. This experimental design tested the hypotheses that (a) abused women are in need of numerous resources upon leaving a woman's shelter, (b) meeting with advocates increases women's effectiveness in obtaining resources and social support, and (c) success in obtaining resources and social support increases women's levels of life satisfaction and decreases further abuse. Abused women ($N=141$) were recruited from a battered woman's shelter and interviewed upon their exit from the shelter as well as 10 weeks thereafter. Half of the women ($n=71$) were randomly assigned to receive advocacy services that assisted them in accessing needed community resources. A variety of instruments were chosen, adapted, and/or constructed in order to measure (a) depression, (b) fear and anxiety, (c) locus of control, (d) emotional attachment to abuser, (e) self-efficacy, (f) social support, (g) perceived overall psychological well-being or quality of life, (h) physical abuse, and (i) women's possession of resources perceived to be instrumental in leaving abusive situation. A repeated-measures multivariate analysis of variance was conducted with two time periods (pre and post), one independent variable (experimental vs. control group), and nine outcome variables. A time X intervention

interaction was marginally significant $F_{(9, 121)} = .058$. Univariate analyses suggested that abused women who received the advocate services reported greater improvement on social support ($F_{(2, 131)} = 11.71, p < .05$) and quality of life ($F_{(2, 131)} = 4.10, p < .05$).

A six-month follow-up study by Sullivan and colleagues (1994) resulted in a 93% retention rate ($n=131$). Abused women in both the experimental and control groups reported increased social support, increased quality of life, less depression, less emotional attachment to their abusers, and an increased sense of personal power. Women who had worked with advocates continued to report being more satisfied with their overall quality of life. A multivariate repeated measures analysis of variance was conducted using the time periods of pre-intervention, post, and six-month follow-up, one independent variable (experimental vs. control condition), and nine outcome variables. A time X condition interaction effect was significant $F_{(18, 108)} = 1.87, p < .05$. Univariate tests within a MANOVA indicated the experimental group reported higher levels on social support $F_{(1, 125)} = 13.74, p < .01$. A *t* test conducted at the six-month time period that the experimental group reported higher overall quality of life. At six-month follow-up, two thirds of all the abused women were not involved with their abusers. There were no differences between the experimental and control women on whether they were involved with their abusers. Of the women that were with their abusers at six months, 76% reported being physically harmed over the last 6 months and 95% reported psychological abuse. Some of these abused women (32%) felt they needed medical attention but did not receive it; 23% did receive medical attention for the abuse in the past 6 months. Sixty-

three percent called the police at least once with 43% being somewhat or very dissatisfied with the police response.

Another study examined abused women's experiences obtaining health care related to the violence in their lives. Gerbert et al. (1996) conducted in-depth, face-to-face interviews with 31 abused women recruited by random digit dialing of households and by a publicity recruitment campaign. Questions asked related to the women's lives and the abuse, their experiences in health care settings and the extent to which health care professionals offered support and referrals regarding the abuse. Using a Systems Model, the researchers organized the results into patient, provider, and organizational levels.

At the patient level, many of the women chose to conceal their abuse from the health care professional due to feeling ashamed or fear of retaliation from the batterer. At the provider level, the women perceived the health care professionals to be disinterested or unsympathetic towards their needs. Many women felt ignored or trivialized. At the organizational level, some women felt the current health care system does not teach health care professionals to deal with intimate partner violence beyond the treatment of physical injuries. Other studies have indicated that health care professionals are least effective in helping battered women when compared to other help sources (Bowker & Maurer, 1987; Brendtro & Bowker, 1989).

Summary

In summary, the literature documents that the domains of health, as identified by Ware and colleagues (Ware, 1987; Ware & Sherbourne, 1992), are affected by intimate

partner violence (IPV). Several studies have shown that abused women's physical functioning and physical role functioning are compromised as evidenced by the women's reporting of more trauma and physical symptoms, more sexual dysfunction and gynecological disorders, and higher utilization of health care services (Bergman & Brismar, 1991; Chapman, 1989; McCauley et al., 1995; Wagner & Mongan, 1998). Furthermore, women with a history of IPV present with significantly more bodily pain (Chapman, 1989; Haber, 1985). The general mental health of abused women is impacted by IPV with high levels of anxiety and depression (Bergman & Brismar, 1991; Jaffe et al., 1986; McCauley et al., 1995), suicide attempts (Bergman & Brismar, 1991; McCauley et al., 1995), and poor scores on mental health instruments (McCauley et al., 1995; Mullen et al., 1988) being reported. Research also indicates that vitality is also affected by IPV with increased feelings of tiredness (Wagner & Mongan, 1998) and poor sleep patterns (Dobbie & Tucker, 1990; Wagner & Mongan, 1998). A lack of social support and relationships with others has impaired the social functioning and emotional role functioning of abused women (Dobbie & Tucker, 1990). In general, abused women report overall poor health (Mullen et al., 1988; Wagner & Mongan, 1998).

Although abused women suffer physically, mentally, sexually, socially, and financially, they persistently seek help to end the violence in their lives. These women contact a variety of sources for help. When abused women do reach out for assistance with the violence in their lives, they most often seek help from the police. While previous research in shelters and clinical settings has shown the degree to which abused suffer

physically and mentally, the perceived health status of abused women who contact the police for help is unknown. The few studies that have examined the outcomes of helpseeking have shown that abused women's lives tend to improve after receiving help from social service agencies and the court system. What happens to the abused women's perceptions of health after helpseeking at the police department is also unknown.

CHAPTER 3

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

A descriptive, longitudinal, repeated-measures study design was employed to examine the hypothesis regarding abused women's perceptions of health before and after seeking help at a police department. The research hypothesis states there will be a change in abused women's perceptions of health after seeking help at a police department. The dependent variable, perceptions of health, was measured at time of seeking help at a police department and then 3 and 6 months after seeking help.

A descriptive research design is employed when there is lack of information about characteristics within a particular field of study (Burns & Grove, 1997). A descriptive design may be useful in identifying problems with current practice or justifying current practice. This research design is most appropriate because there are no identified studies in the literature that have examined the health perceptions of abused women who have contacted the police for help.

According to Burns and Grove (1997), a longitudinal design examines changes in the same participants over an extended period of time. This study utilized a longitudinal design because the purpose of the study was to measure changes in perceptions of health status over time. The follow-up time frames, 3 and 6 months, were chosen based on previous research on batterers who reassault their intimate partners (Gondolf, 1997;

Tolman & Bennett, 1990). Gondolf (1997) conducted a comparative multisite evaluation of four batterer treatment programs in geographically distributed cities to assess the pattern of reassault. Nearly half of the batterers who reassaulted did so within 3 months after they entered the treatment program. In another study, 29% of the female victims of intimate violence reported being assaulted during the 6 months after her assault case had been prosecuted (Ford & Regoli, 1992).

Setting

The data for this study were collected at a Family Violence Unit (FVU) within a large urban police department located in southeast Texas between the months of January to August 1998. The FVU was established in 1991 in recognition of the need to deal with violence against women and within families. Services offered by the FVU include taking offense reports, filing charges, conducting investigations, making arrests, assisting with how-to obtain protection orders, providing outreach to high risk cases and victim's compensation liaison as well as testifying in court and court accompaniment. One lieutenant, four sergeants, fifteen police officers, one administrative supervisor, ten counselors, ten senior police service officers, and four clerical personnel staff the unit. All unit members are highly trained in family violence. An average of 300 persons, mainly women, presents to the unit each month for assistance with family and intimate partner violence. At the time of the study, the FVU was open Monday through Friday from 6:00 a.m. to 6:00 p.m.

In order to file charges, a woman must arrive at the FVU, which is located on the eleventh floor of the police department's building. To gain access to the building, a photographic identification form (i.e. driver's license) must be presented to a police officer who then performs a brief computer background investigation on the woman. If the woman clears the background investigation, she then must pass through a metal detector prior to entering an elevator. Upon reaching the reception area of the FVU, the woman signs her name and prints the police incident number, if one is available, on a sign-in sheet. She is then instructed to sit down in a waiting room adjacent to the reception area. A video cassette recorder in the waiting room occasionally displays video recordings on the subject of family violence. The waiting room also has a separate play area for children. While waiting to be seen by the crisis counselor, the woman is instructed to complete FVU forms regarding the abuse incident. Wait time can vary from 5 to 30 minutes.

After completing the FVU forms, the woman then meets with a crisis counselor in a private room. During this time, the crisis counselor reviews the forms, answers questions, and distributes information. After meeting with the crisis counselor, the woman is then assigned to either a police officer or a senior police service officer who gathers additional information regarding the abuse incident. At this point, it is often determined whether or not the woman has enough evidence to warrant a police investigation.

Population and Sample

The target population for this study was all women who attempted to file assault charges against an intimate partner. The sampling frame consisted of women who: (a) intended to file charges of assault, stalking, or harassment against an intimate partner, (b) were 18 years of age or older, and (c) spoke English. A consecutive sample of all women attempting to file charges and meeting study criteria was obtained during a 35-day period. According to Hulley and Cummings (1988), consecutive sampling is the best and most practical of the nonprobability techniques. This particular study was part of a larger study that included the sampling of men and women. However, the sample in this research was limited to only those women who attempted to file charges on an intimate partner.

Sample size was estimated using Cohen's (1988) power and sample size tables. The estimate assumed an alpha level of .05 for a two-tailed test with 80% power and an intertemporal correlation score of .60. To detect a medium effect, it was determined that 74 women were needed. In order to allow for attrition, 90 women were recruited.

Protection of Human Participants

Approval for this study was obtained from the police department (see Appendix C) and the Texas Woman's University Human Subjects Review Committee (see Appendix D). All recruited women were provided essential information for informed consent and signed a consent form (see Appendix E). Potential risks to the women were: (a) loss of confidentiality, (b) time involvement, (c) fatigue, (d) distress and embarrassment due to the nature of some of the questions, (e) anxiety, and (f) potential

retaliation from the intimate partner. Steps to be taken to protect the women included maintaining confidentiality by the use of study code numbers for identification, reporting of aggregate data, omitting identifiers on the instrument cover sheets, and destroying all identifiers upon completion of the study. All study material was kept in a locked file cabinet. Interview times were scheduled according to the women's convenience. Rest periods were encouraged to prevent fatigue. Women were encouraged to stop the interview whenever discomfort, distress, or anxiety was present. All women were informed about the possible risk of retaliation from the intimate partner and measures to take to protect one's self. All women were also notified that they might withdraw from the study at any time without penalty.

Instrumentation

Two instruments were used to collect data: (a) a demographic data form, and (b) the MOS 36-Item Short-Form Health Survey (SF-36) (Ware, 1993).

Demographic Data Form

The demographic data form (DDF) (see Appendix A) was used to identify demographic characteristics of the sample at the time they were attempting to file charges against an intimate partner. Questions about name, address, telephone numbers, and employer were important in order to maintain contact with the women throughout the study. The form also included questions about age, education, income (interval level data), ethnicity, gender, employment status, and relationship status with the abuser

(nominal level data). These sample attributes were included in order to compare the research results with previous studies that specify demographic data on abused women.

MOS 36-Item Short-Form Health Survey (SF-36)

The SF-36 (see Appendix B) was developed as part of the Medical Outcomes Study (MOS) at the New England Medical Center in Boston and the Rand Corporation in Santa Monica, California (Ware & Sherbourne, 1992; Ware, 1993). The MOS produced health surveys that assessed 40 physical and mental health concepts. The SF-36 was constructed to represent eight of the most important health concepts included in the MOS and other widely used health surveys. According to Ware and Sherbourne (1992), the items of the SF-36 were chosen and adapted from instruments. The instrument measures how persons feel they are functioning in the real world, with or without health problems.

The SF-36 contains 36 questions, divided into eight scales, related to health status. The eight scales and a description of each are listed in Table 2. The instrument was constructed for self-administration by people 14 years and older or for administration by a trained interviewer in person or by telephone. The instrument can be completed in less than 10 minutes and scored with an optical scanning machine or by hand.

Table 2

Description of SF-36 Scales

SF-36 Scale	Description	# of items	Raw Score Range	Converted Score Range
Physical Functioning (PF)	Performance of physical activities such as bending, kneeling, walking, bathing	10	10 - 30	0 - 100
Role limitations due to Physical problems (RP)	Problems with work or daily activities as a result of physical health	4	4 - 8	0 - 100
Role limitations due to Emotional problems (RE)	Problems with work or daily activities as a result of emotional problems	3	3 - 6	0 - 100
Social Functioning (SF)	Performance of normal social activities in relation to physical or emotional problems	2	2 - 10	0 - 100
Bodily Pain (BP)	Questions regarding pain or limitations due to pain	2	2 - 12	0 - 100
Mental Health (MH)	Questions regarding anxiety, depression, sense of control, and psychological well-being	5	5 - 30	0 - 100
Vitality (VT)	Questions regarding energy level and fatigue	4	4 - 24	0 - 100
General Health perceptions (GH)	Questions regarding the person's beliefs on the status of their general health	5	5 - 25	0 - 100

The SF-36 items and scales are scored so that a higher score indicates a better perception of health. For example, functioning scales are scored so that a high score indicates better functioning and the pain scale is scored so that a high score indicates freedom from pain. Responses for each of the eight scales are summed and scores converted to ratings on a scale from 0 to 100, with 100 indicating highest well-being or functioning (interval data) (Ware, 1993). The lowest and highest possible raw scores for each scale are listed in Table 2.

The developers (Ware, 1993) of the SF-36 recommend reproducing the data entry response numbers exactly as described in the manual. Once the instrument is completed, the SF-36 item responses are then keypunched as marked and coded. The next stage is recoding response choices.

In the SF-36, there are 10 items that require recoding (two bodily pain items, four general health items, four vitality items, and two social functioning items) (Ware, 1993). After item recoding, a raw score is computed for each scale. Once the raw scale scores are computed, each score is then transformed to a 0 to 100 scale using the following formula:

$$\text{Transformed Scale} = \left[\frac{\text{Actual raw score} - \text{lowest possible raw score}}{\text{Possible raw score range}} \right] \times 100$$

This transformation converts the lowest possible score to zero and the highest possible score to 100. Scores between these values represent the percentage of the total possible score achieved. For example, a physical functioning raw score of 21 would be transformed as:

$$\left[\frac{(21-10)}{20} \right] \times 100 = 55$$

Where lowest possible score is 10 and the range is 20.

These transformed scale scores can then be compared with scores from previous studies using the SF-36.

Reliability. The SF-36 is a generic health perception or health status instrument that has been tested with a wide variety of populations regardless of their health conditions or situations. The instrument has been tested in 260 clinical settings and has been translated into 10 different languages (Ware, 1993). Estimates of score reliability for the SF-36 have been reported for 14 studies, and vary from .60 to .94 (Ware, 1993). Table 3 provides a summary of some of these reliability estimates. For each scale, the median of the reliability coefficients equaled or exceeded .80, with the exception of the Social Functioning scale where the median for this two-item scale was .76 (Ware, 1993). Most of the studies used the internal consistency method and Cronbach's coefficient alpha when calculating reliability for each scale. The majority of these studies used the postal survey or self-administration method when utilizing the SF-36.

Table 3

Reliability Estimates for SF-36 Scales

Reliability Estimates ^a									
Author	PF	RP	BP	GH	VT	SF	RE	MH	Sample/Comments
Kantz et al., 1992	.88	.90	.80	.83	.88	.77	.80	.82	N=66, total knee replacement patients
Kurtain et al., 1992	.90	.76	.79	.82	.62	.76	.90	.67	N=39, hemodialysis patients
Nerenz et al., 1992	.90	.60	.43	.83	.68	.60	.60	.80	N=235, diabetic patients, 6 month interval
Brazier et al., 1992	.81	.69	.78	.80	.80	.60	.63	.75	N=1,582, general practice patients in UK
Garratt et al., 1993	.92	.89	.86	.83	.86	.80	.86	.86	N=1,310, patients with 1 of 4 chronic conditions and general population sample, N=542
McHorney et al., 1994	.93	.84	.82	.78	.87	.85	.83	.90	N=3,445, patients with one or more chronic conditions
McHorney et al., 1994	.94	.89	.88	.83	.87	.63	.81	.82	N=1,692, random sample of US population

Note. PF = physical functioning; RP = role-physical; BP = bodily pain; GH = general health; VT = vitality; SF = social functioning; RE = role-emotional; MH = mental health

^aInternal consistency reliability (Cronbach's α). Adapted from Ware, 1993.

Validity. According to Ware (1993), two kinds of strategies were used to evaluate the validity of the SF-36. First, content validity was judged by comparing the SF-36 with other similar health surveys such as the Nottingham Health Profile, Duke Health Profile, Health Insurance Experiment, Sickness Impact Profile, Dartmouth COOP Function Charts, McMaster Health Index Questionnaire, and the Quality of Well-Being Scale. This comparison revealed that the SF-36 includes eight of the most frequently represented health concepts which are physical functioning, role limitations due to physical and emotional problems, social functioning, bodily pain, mental health, vitality, and general health perceptions.

Second, Ware and his colleagues (1993) then used factor analysis and numerous correlational studies to evaluate the validity of the SF-36. Because the SF-36 was constructed to represent two dimensions of health, physical and mental, the researchers extracted these two principal components from the correlations among the SF-36 scales and rotated them orthogonally. This two-factor solution accounted for 82.4% of the variance. The results are listed in Table 4.

The researchers (Ware, 1993) concluded from the factor analysis that there was strong evidence for the conceptualization of health underlying the construction of the SF-36. The results indicated that some scales principally measure the physical dimension of health (physical functioning, role-physical, and bodily pain); others principally measure the mental component of health (mental health, role-emotional, and social functioning). Others (vitality and general health) appear to measure both.

Table 4

Scale Validity and Correlations of the SF-36

Subscale	Hypothesized Association ^a		Rotated Principal Components	
	Physical	Mental	Physical ^b	Mental ^b
Physical Functioning	Strong	Weak	.88	.04
Role-Physical	Strong	Weak	.78	.30
Bodily Pain	Strong	Weak	.77	.24
Mental Health	Weak	Strong	.12	.90
Role-Emotional	Weak	Strong	.19	.81
Social Functioning	Moderate	Strong	.44	.71
Vitality	Moderate	Moderate	.59	.57
General Health Perceptions	Moderate	Moderate	.68	.32

Note. ^aAssociations: Strong ($r \geq .70$) Moderate ($.30 < r < .70$) Weak ($r \leq .30$)

^bCorrelation between each scale and rotated principal component.
From McHorney et al., 1995.

Data Collection Procedure

Once approvals from the Texas Woman's University Human Subjects Review Committee and the FVU were received, data collection began. This study was part of a larger study that included a team of master's or doctorally prepared registered nurses who were trained on how to administer all instruments and perform data collection. This same team of nurses collected the data at the three and six month intervals. Once data collection commenced, the process continued every day until 90 women were recruited. In order to prevent researcher fatigue and stress, researchers scheduled their time in six-hour blocks and avoided interviewing more than six women a day.

All women were recruited when they arrived at the FVU and attempted to file charges against their intimate partners. The researchers introduced themselves and explained the study to each woman. After verbal agreement to participate was given, a consent form was presented and signed. Every woman was given a card with the researcher's name and office telephone number. Women were encouraged to telephone the researcher if there were any questions or if they changed address or telephone numbers. The researchers explained that the women were to be contacted three and six months following the helpseeking action in order to complete the longitudinal study. Women were paid \$20 for each completed interview. All interviews were conducted in either a private room or in an assigned office cubicle in the FVU.

Once the consent form was signed, the demographic data form and SF-36 were completed in a face-to-face interview between the nurse and the woman. The nurse read

all questions and marked the answers given by the woman. The face-to-face interview method was chosen because it tends to produce high response rates, protects against ambiguous or confusing questions and omitted answers, and allows individuals to participate who cannot fill out a questionnaire, such as the blind or illiterate (Burns & Grove, 1997).

Other instruments were also completed at this time as part of the larger study. The woman was encouraged to ask questions throughout the completion of the instruments. The entire interaction from introduction to completion of the instruments took approximately 25 minutes. Women were reminded that the interview would take place again via telephone in three and six months. In order to prevent significant loss of women during the follow-up interviews, the researchers emphasized the need to maintain contact via accurate telephone numbers.

The follow-up telephone interviews began with a verbal consent. The study was briefly re-explained and women were asked if they wanted to continue. In order to maintain continuity, each of the four researchers had accepted approximately 25 women that they followed throughout the six-month study period. Follow-up payments for the study were in the form of a money order and mailed to the women's address. Women were again given the researcher's office telephone number and told that they could contact her any time with questions or concerns. The office telephone line was continuously connected to a voice mail message system.

Treatment of Data

The coded data from the study was inputted into a personal computer file and analyzed using the SPSS® Version 9.0 software. Frequency distributions were created to help identify any coding or entry errors. Descriptive statistics appropriate to the level of measurement were calculated. The following demographic variables were measured at the nominal level: gender, ethnicity, and relationship status with abuser, employment status. The following demographic variables were measured at the interval/ratio level: age, education, and income.

The reliability of the SF-36 with abused women who seek help at the police department was estimated with an internal consistency approach or Cronbach's alpha, the most appropriate approach for an instrument containing interval scale measurements (Nunnally & Bernstein, 1994). Reliability estimates were calculated for each of the eight scales of the SF-36. Because the SF-36 is a well-developed instrument, reliability coefficients for each scale should equal or exceed .80 (Nunnally & Bernstein, 1994).

In order to test the null hypothesis, (there will be no change in perceptions of health for abused women who seek help at a police department.), a multivariate approach one-way repeated-measures analysis of variance (ANOVA) was employed. The alternative hypothesis was: There will be a change in perceptions of health. Mean scores were calculated for each of the eight SF-36 scales at the three separate measurement intervals (initial measurement, 3 months and 6 months after initial measurement). The ANOVA evaluates mean differences between two or more treatments by comparing the

actual differences versus the amount of difference that would be expected by chance (Gravetter & Wallnau, 1996). The level of significance for this study was $\alpha = .00625$ (.05/8 scales of the SF-36). Significant F statistics will be followed by post-hoc contrasts.

CHAPTER 4

ANALYSIS OF THE DATA

The purpose of this study was to examine abused women's perceptions of health before and after attempting to file charges against an intimate partner at a police department. A demographic data form was used to identify the characteristics of the sample at the time of helpseeking. The Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) (Ware, 1993) was used to assess the abused women's perceptions of health. Descriptive statistics were used to summarize the sample demographic data. Data related to perception of health were summarized using descriptive statistics and analyzed using a multivariate approach one-way repeated measures analysis of variance (ANOVA). Internal consistency reliability of the SF-36 was estimated by calculation of Cronbach's alpha for the eight scales of the instrument.

Description of the Abused Women

A consecutive sample of all women attempting to file charges and meeting study criteria was obtained during a 35-day period. A total of 90 women consented and were interviewed. Six women declined the interview citing time restriction and/or pain from the intimate partner violence as reasons for nonparticipation. Of the 90 women who were interviewed at time of helpseeking, 87 were available at the 3-month interview for a 97% retention rate. It was determined that the three abused women who were not available at 3

months were unsafe for follow-up contact based on telephone conversations with the three women's family and/or friends. Two of these women were in hiding from the abusers and one was living with the abuser. At the 6-month interview, in addition to the three unsafe abused women (3%), two women withdrew from the study (2%) and two women could not be found (2%) despite numerous telephone and postal inquiries. The final retention rate at six months was 92% ($N=83$).

More than half of the abused women were African-American ($n=49$, 54%) with one woman classifying her ethnicity as "other" stating she was African-American and white. The women's ages ranged from 19 years to 59 years with a mean age of 30.8 years ($SD=9.04$). Fifty-nine of the women (66%) were employed at least part-time and 69% had obtained at least a high school diploma with a mean of 12.14 years ($SD=2.26$) of education. The intimate partners' demographic characteristics were similar with the exception of gender. Almost all of the intimate partners were male ($n=89$; 99%) (see Table 5).

Over half of the abused women ($n=49$; 54%) were in current relationships with the intimate partner (i.e. spouse or boyfriend). The majority of the women reported an annual income below \$30,000 ($n=70$; 78%) (see Table 6).

Table 5

Distribution of Age, Gender, Ethnicity, Educational Status and Employment Status of the Abused Women and their Intimate Partners (N=90)

Variable	Abused Women		Intimate Partners	
	n	%	n	%
Age				
18 - 27	39	43.3	30	33.3
28 - 37	31	34.4	35	38.9
38 - 47	15	16.7	20	22.2
48 - 57	4	4.4	4	4.4
58 - 67	1	1.1	1	1.1
Gender				
Female	90	100	1	1.1
Male			89	98.9
Ethnicity				
African American	49	54.4	53	58.9
Hispanic	25	27.8	19	21.1
White	13	14.4	15	16.7
Asian	2	2.2	1	1.1
Other	1	1.1	2	2.2
Educational Status				
Did not complete high school	28	31.1	28	31.1
High school diploma	33	36.7	40	44.4
Some college	18	20.0	9	10.0
College degree	8	9.9	7	7.8
Some post-graduate courses	3	3.3		
Graduate degree			2	2.2
Do not know			3	3.3
Missing			1	1.1
Employment Status				
Employed	59	65.6	62	68.9
Not employed	31	34.4	27	30.0
Missing			1	1.1

Table 6

Distribution of Relationship Status with Intimate Partner and Annual Family Income

(N=90)

Variable	n	%
Relationship Status		
Spouse/Common-law spouse	35	38.9
Ex-spouse/ex-common-law spouse	4	4.4
Boyfriend/Girlfriend	14	15.6
Ex-boyfriend/Ex-girlfriend	35	38.9
Estranged Partner	2	2.2
Annual Family Income		
Less than \$5,000	31	34.4
\$5,000 to \$9,999	13	14.4
\$10,000 to \$19,999	12	13.3
\$20,000 to \$29,999	14	15.6
More than \$30,000	18	20.0
Do not know	2	2.2

Findings of the Study

The SF-36 was used to assess perceptions of health in this study. The abused women completed the SF-36 at time of attempting to file charges against their intimate partner and were asked to answer all questions in relation to the 3-months prior to seeking help. The SF-36 was then readministered at three and six months following helpseeking. The SF-36 items and scales are scored so that a higher score indicates a better perception of health. Responses for each of the eight scales are summed and scores

converted to ratings on a scale from 0 to 100, with 100 indicating highest well-being or functioning (Ware, 1993).

In order to test the null hypothesis of this study, (there will be no changes in perceptions of health for abused women who seek help at a police department), mean scores were calculated for each of the eight SF-36 scales at the three measurement intervals (Table 7).

Table 7

Health Perception Mean Scores (SF-36) Over Time (N=83)

SF-36 Scale	Initial (SD)	3 Month (SD)	6 Month (SD)
Physical Functioning	80.90 (26.88)	84.16 (27.95)	84.94 (26.07)
Role-Physical	56.33 (43.45)	68.98 (40.87)	71.99 (42.12)
Bodily Pain	52.52 (27.44)	75.06 (28.21)	76.75 (30.29)
General Health	64.28 (24.52)	67.07 (23.12)	69.78 (22.96)
Vitality	41.32 (23.69)	54.28 (25.45)	56.99 (25.01)
Social Functioning	56.93 (30.38)	71.08 (28.88)	72.14 (30.14)
Role-Emotional	29.32 (40.12)	62.65 (43.37)	56.22 (45.96)
Mental Health	43.28 (25.89)	63.32 (24.26)	62.70 (24.93)

A multivariate approach one-way repeated measures ANOVA was employed to evaluate the mean differences over time ($\alpha=.00625$) (see Table 8).

Table 8

Results of Global Repeated Measures ANOVA of the Study Sample (N=83)

SF-36 Scale	$F(2, 81)$	p	Observed Power	Sample Size Needed for .80 Power
Physical Functioning	.772	.465	.177	509
Role-Physical	5.289	.007	.823	78
Bodily Pain	27.576	<.0005 ^a	1.000	19
General Health	2.006	.141	.403	199
Vitality	13.208	<.0005 ^a	.997	34
Social Functioning	8.171	.001 ^a	.954	52
Role-Emotional	16.847	<.0005 ^a	1.000	28
Mental Health	25.334	<.0005 ^a	1.000	20

^aSignificant for $\alpha=.00625$

Results of the global ANOVA indicate there are significant differences in abused women's perceptions of health over time for the SF-36 scales of Bodily Pain, Vitality, Social Functioning, Role-Emotional, and Mental Health. Adequate power ($\geq .80$), as defined by Cohen (1988), was observed for 6 of the 8 scales. The two scales (Physical Functioning and General Health) displaying undesired power values also produced non-significant F statistics. Effect sizes of the SF-36 results for the three separate time intervals and global ANOVA are listed in Table 9.

Table 9

Observed Effect Sizes of the SF-36 Results for the 3 Time Intervals and Global ANOVA
for the Study Sample (N=83)

SF-36 Scale	Initial and 3-months		3 and 6 months		Initial and 6-months		Effect Size for Global ANOVA ^b
	Effect Size ^a	# points	Effect Size ^a	# points	Effect Size ^a	# points	
Physical Functioning	.12	3	.03	1	.15	4	.02
Role-Physical	.30	13	.07	3	.37	16	.12
Bodily Pain	.81	22	.06	2	.84	24	.40
General Health	.12	3	.12	3	.23	6	.05
Vitality	.53	13	.11	3	.64	16	.25
Social Functioning	.48	14	.04	1	.50	15	.17
Role- Emotional	.80	33	.14	-6	.62	27	.30
Mental Health	.80	20	.02	-1	.76	19	.38

^aEffect size calculated with effect size index for two-tailed case: $d = \frac{|\underline{m}_A - \underline{m}_B|}{\sigma}$
(Cohen, 1988)

^bEffect size calculated with Wilks' lambda (Λ): Multivariate $\eta^2 = 1 - \Lambda$
(Green et al., 1997)

According to Cohen (1988), conventional definitions of effect size (ES) state that for a small ES $d=.20$, for a medium ES $d=.50$, and for a large ES $d=.80$. Based on these values, large effect sizes were observed at the time interval between initial and 3-months for the scales of Bodily Pain, Role-Emotional, and Mental Health. For this same time interval, medium effect sizes were observed for the scales of Vitality and Social Functioning. Small to negligible effect sizes were observed for the scales of Physical Functioning, Role-Physical, and General Health. For the time interval between 3 and 6 months, the effect sizes were negligible. For the time interval between initial and 6 months, large effect sizes were observed for the scales of Bodily Pain and Mental Health. Medium to large effect sizes were observed for the scales of Vitality and Role-Emotional. Small to medium effect sizes were observed for Role-Physical and Social Functioning. And, small effect sizes were observed for the scales of Physical Functioning and General Health.

Using the effect size formula for the multivariate test associated with Wilks' lambda (Λ): Multivariate $\eta^2=1-\Lambda$ (Green et al., 1997, p. 254), the effect sizes for the multivariate approach ANOVA ranged from negligible to medium.

Of the five scales that displayed significant F statistics, post hoc pairwise comparisons were evaluated with these scales using a Bonferroni adjustment for the familywise α of .00625 divided by 3 levels ($\alpha=.002$) (Table 10).

Table 10

Pairwise Comparisons for Significant SF-36 Scales (N=83)

SF-36 Scale	Time	Contrast Value	Separate Error Term	F value	Probability
Bodily Pain	1 and 2	-22.542	3.689	37.34	<.0005 ^a
	1 and 3	-24.229	3.472	48.69	<.0005 ^a
	2 and 3	-1.687	3.373	.250	.618
Vitality	1 and 2	-12.952	3.113	17.31	<.0005 ^a
	1 and 3	-15.663	3.079	25.88	<.0005 ^a
	2 and 3	-2.711	2.461	1.21	.274
Social Functioning	1 and 2	-14.157	3.838	13.61	<.0005 ^a
	1 and 3	-15.211	4.094	13.80	<.0005 ^a
	2 and 3	-1.054	3.293	.102	.750
Role-Emotional	1 and 2	-33.333	5.771	33.36	<.0005 ^a
	1 and 3	-26.908	6.245	18.57	<.0005 ^a
	2 and 3	6.426	5.189	1.53	.219
Mental Health	1 and 2	-20.048	2.885	48.29	<.0005 ^a
	1 and 3	-19.422	3.307	34.49	<.0005 ^a
	2 and 3	.627	2.593	.058	.810

^aSignificant for $\alpha=.002$

Results of the pairwise comparisons indicate there were significant differences for all 5 significant SF-36 scales (improvement in mean scores) between Time 1 (initial measurement) and Time 2 (3 months) and between Time 1 and Time 3 (6 months). For all of the 5 scales, there were no significant differences in mean scores between 3 and 6 months.

Reliability of the SF-36

Reliability coefficients were computed for each of the eight scales of the SF-36 over time using an internal consistency approach or Cronbach's alpha (Table 11).

Table 11

Reliability Estimates for SF-36 Scales Over Time

SF-36 Scale	Number of Items	Reliability Estimates ^a		
		Initial (n=90)	3-month (n=87)	6-month (n=83)
Physical Functioning	10	.95	.96	.96
Role-Physical	4	.91	.92	.95
Bodily Pain	2	.76	.90	.95
General Health	5	.80	.82	.83
Vitality	4	.80	.85	.89
Social Functioning	2	.66	.80	.83
Role-Emotional	3	.85	.87	.91
Mental Health	5	.84	.85	.89

^aInternal Consistency Reliability (Cronbach's alpha)

Because the SF-36 is a well-developed instrument, reliability coefficients for each scale should equal or exceed .80 (Nunnally & Bernstein, 1994). At the initial measurement, two of the reliability estimates were less than .80; the Social Functioning

and Bodily Pain scales. Both of these scales contain only 2 items. Reliability of a scale depends on the number of items in the scale and the correlation between the items (Nunnally & Bernstein, 1994). Over time, all eight scales demonstrated adequate reliability estimates that exceeded .80.

Summary of the Findings

A total of 83 abused women participated in this descriptive, longitudinal study to determine if perceptions of health change after attempting to file assault charges (helpseeking) against an intimate partner at a police department. Perceptions of health were measured with the SF-36 (Ware, 1993) at time of helpseeking for the three months prior and then remeasured three and six months after helpseeking.

In order to test the hypothesis that there will be changes in perceptions of health for abused women who seek help at a police department, a multivariate approach to ANOVA for repeated measures was employed to analyze the data from the SF-36. The analysis revealed that perceptions of health did significantly change in five out of the eight scales of the SF-36 for abused women who sought help at a police department. For these five scales of the SF-36, perceptions of health were significantly improved three and six months after helpseeking. Adequate reliability of the SF-36 with the abused women was demonstrated.

CHAPTER 5

SUMMARY OF THE STUDY

The battering of women by intimate partners is a serious health problem in the United States. Because abused women primarily contact the police when trying to end the intimate partner violence (IPV) in their lives, this study was designed to determine if perceptions of health changes after contacting the police. Additionally, standard protocol for health care professionals who treat victims of IPV includes community referrals to law enforcement for safety purposes. This study was conducted in order to assess the health outcomes of abused women who seek help at a police department. The conceptual framework utilized in this study was based on Ware's (1993) definition of health that states health is comprised of eight separate domains. This chapter includes a summary of the study, discussion of the study findings, conclusions, and implications for practice. Recommendations for further research are made.

Summary

A descriptive, longitudinal design with repeated measures was used to study perceptions of health of abused women who attempt to file assault charges (helpseek) at a police department. Abused women were recruited using a nonprobability, consecutive sampling technique at a Family Violence Unit (FVU) within a large urban police department. Perceptions of health were measured for the three months prior to

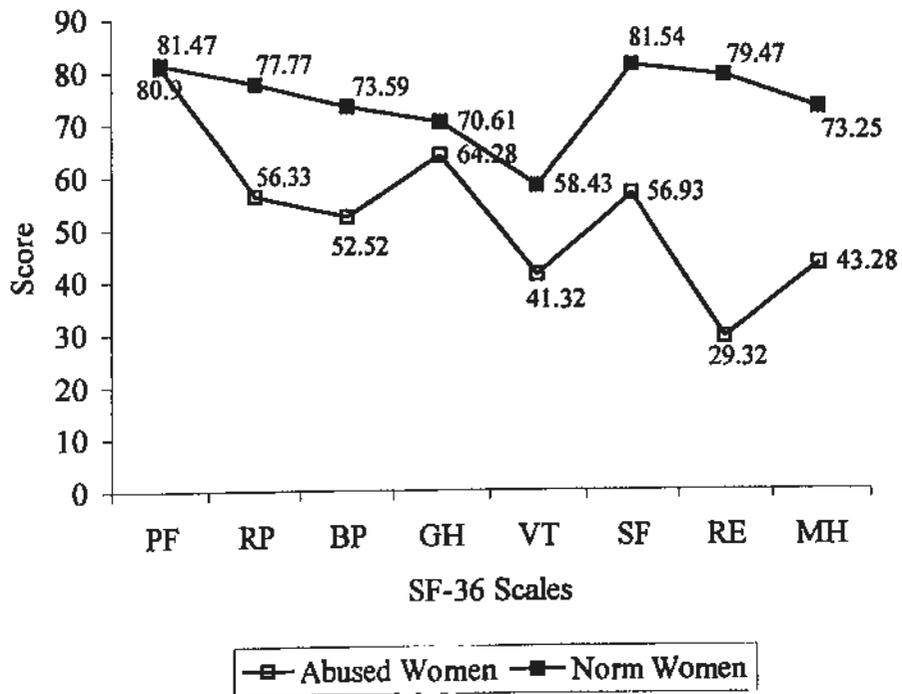
helpseeking and then remeasured 3 and 6 months after helpseeking. Six months after helpseeking, 83 women from the original sample of 90 women participated in the study. The research hypothesis (there will be a change over time in health perceptions of abused women who helpseek at a police department) was examined using a multivariate approach to ANOVA for repeated measures. Five post hoc pairwise comparisons were performed.

Discussion of the Findings

The theoretical propositions examined in this study were: (a) abused women seek help because the violence in their lives is affecting their health, and (b) if abused women seek help due to violence that is affecting their health, then perceptions in health will change after helpseeking. The first proposition was supported by the findings of this study. At time of helpseeking, when compared to a normal population of women in the United States ($N=1,412$; Ware, 1993), the FVU abused women reported lower levels of health than norm women with the exception of the Physical Functioning scale (see Figure 1).

Because the SF-36 has been used extensively, it is possible to compare the FVU abused women's initial scores with various patient populations. Figure 2 demonstrates how the FVU abused women's means scores compare to two different patient populations on the SF-36. When compared to patients diagnosed with psychiatric and serious medical conditions ($N=45$; McHorney, Ware, & Raczek, 1993), the FVU women reported higher scores for the scales of Physical Functioning, Role-Physical, and General Health

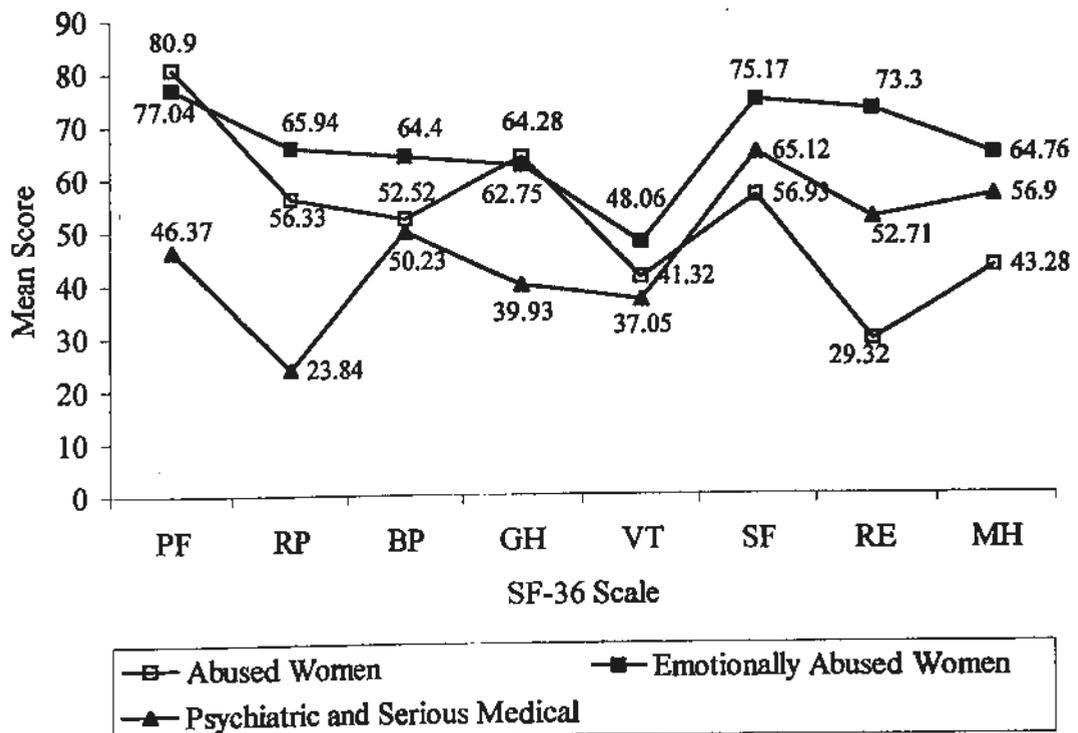
Figure 1

Comparison of Mean Scores of Abused Women with Norm Women^a on the SF-36

^aWare, 1993

Figure 2

Comparison of Mean Scores of Abused Women with Emotionally Abused Women^a and Patients Diagnosed with Psychiatric and Serious Medical Conditions^b



^aWagner & Mongan, 1998

^bMcHorney, Ware, & Raczek, 1993

Perceptions. The abused women and these patients had similar mean scores for the scales of Bodily Pain and Vitality. However, at time of helpseeking at the police department, the FVU abused women reported lower scores for the scales of Mental Health, Role-Emotional, and Social Functioning compared to patients with psychiatric and serious medical conditions. Furthermore, when compared to emotionally abused women (Wagner & Mongan, 1998), the FVU women in this study reported lower health scores in six of the eight SF-36 scales. Only in the scales of Physical Functioning and General Health Perceptions did the FVU women score higher than the emotionally abused women.

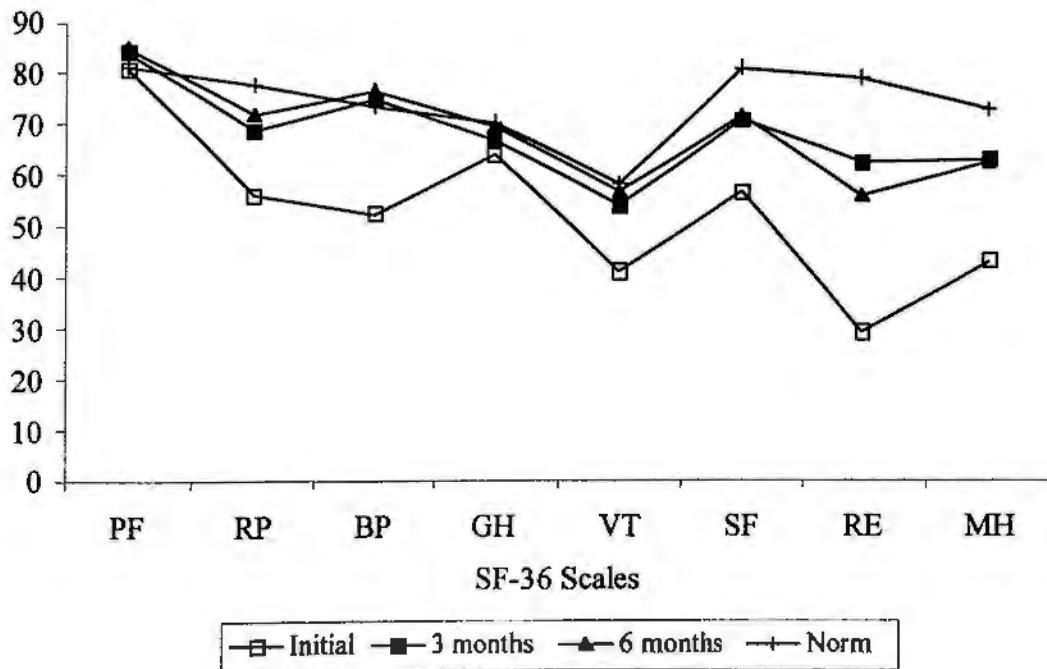
In summary, at time of helpseeking, the FVU abused women's perceptions of health scores were very low when compared to norm as well as unhealthy groups. While these abused women were suffering both physically and mentally, it was the overall mental scales of Role-Emotional, Mental Health, Social Functioning, and Vitality that displayed the poorest scores. In spite of their poor health status, these abused women brought themselves to a police department to file assault charges against their abuser. These abused women's helpseeking behaviors are consistent with Gondolf's (1988) survivor theory and model of helpseeking that theorizes abused women are survivors who assertively and persistently attempt to do something about the violence in their lives. Abuse prompts battered women to contact a variety of informal and formal help sources. A desire to obtain a better life and to preserve functioning and well-being may enable abused women to seek help as suggested by Ware and Sherbourne (1992) and Gondolf (1988).

The second theoretical proposition examined in this study focused on the outcome of the helpseeking behavior: If abused women seek help due to violence that is affecting their health, then perceptions in health will change after helpseeking. This study tested the hypothesis that health perceptions would change over time and found significant changes in the scales of Bodily Pain, Vitality, Social Functioning, Role-Emotional, and Mental Health. For these five scales, significant improvements in health scores occurred between the initial measurement at the police department and the three-month time interval as well as between the initial and six-month time interval. Overall, perceptions of health for five scales significantly improved for abused women who sought help at a police department. By the end of the six-month study time frame, the FVU women's SF-36 means scores looked more like norm women mean scores (see Figure 3).

These findings are consistent with the National Institute of Justice (NIJ) study that evaluated perceived health of abused women who sought help at criminal justice agencies (Keilitz, Hannaford, & Efkeman, 1997). This is the only published helpseeking outcome study conducted under a criminal justice system. The criminal justice agencies in this study were court jurisdictions that issued civil protection orders to victims of domestic violence. The abused women that were recruited for the study had petitioned for a protection order against an intimate partner. The NIJ study reported a retention rate of 62% at the six-month follow-up time period; 177 women were reinterviewed out of the original 285 abused women in the study. The demographic characteristics of the NIJ study participants are similar to the FVU abused women (see Table 12). At six months,

Figure 3

Comparison of SF-36 Mean Scores Between Abused Women at Initial, 3-Months, and 6-Months and Norm Women^a



^aWare, 1993

Table 12

Comparison of the Demographic Characteristics of the FVU Abused Women with the
NIJ Abused Women

Demographic Characteristics	FVU Women (N=90)	NIJ Women ^a (N=285)
Age (mean years)	31	32
Education (at least a high school diploma)	69%	80%
Ethnicity		
African-American	54.4%	50.9%
Hispanic	27.8%	13.3%
White	14.4%	33.7%
Other	3.3%	2.1%
Relationship Status with Intimate Partner		
married/spouse	38.9	23.9%
separated/divorced/ex-spouse/estranged partner	6.6%	30.5%
single/never married/boy or girlfriend	54.5%	45.6%
Employment Status		
Employed	65.6%	67.7%
Not employed	34.3%	29.8%

^aKeilitz, Hannaford, & Efke, 1997

most of the women in the NIJ study felt their life had improved (85.3%), felt better (92.7%), and felt safer (80.5%). The NIJ study concluded that protection orders help abused women in regaining a sense of well-being.

SF-36 Scale Summary

In order to discuss each of the SF-36 scale results, the next section of this chapter will focus on the individual scales.

Physical Functioning, Physical Role Functioning, and General Health Perceptions

This study indicated that the physical functioning (PF) of the FVU abused women was not compromised at time of helpseeking and did not change over time ($p=.465$). The abused women's initial PF mean score of 80.90 was very similar to norm women's mean score of 81.47 (Ware, 1993). These findings are consistent with previous SF-36 research which demonstrated no difference in PF between emotionally abused women and nonabused women (Wagner & Mongan, 1998). Additionally, results from the FVU abused women found no significant difference over time for the scales of physical role functioning (RP) ($p=.007$) and general health perceptions (GH) ($p=.141$). Like the PF comparisons, the GH means scores of the abused women (64.28) were similar to the norm women (70.61). However, the RP mean score for the abused women (56.33) was lower than the norm women (77.77).

These findings are unlike those of Jaffe et al. (1986), who found that women residing in battered women's shelters reported higher levels of somatic complaints, and

Mullen et al. (1988), who found from a random sample of 2000 New Zealand women that abused women had significantly poorer health scores. Both of these studies used the General Health Questionnaire (GHQ). Other studies, utilizing various health questionnaires other than the SF-36, found similar poor health scores with abused women. McCauley et al. (1995) reported that female patients who had experienced intimate partner violence (IPV) were more likely to report more physical symptoms. Bergman and Brismar (1991) found that battered women who presented to an emergency room were more likely to suffer from physical trauma and gynecological and medical disorders.

It is uncertain why the FVU abused women did not perceive deficits in their overall physical health. These results may have been influenced by many factors. A Memphis research team evaluated the characteristics of victims of domestic assault at the scenes of 62 episodes of violence (Brookoff, O'Brien, Cook, Thompson, & Williams, 1997). They found that although nearly all of the domestic assault victims had called the police for help, only 22% had sought medical care, counseling, or shelter in response to the violence. Another study reported that abused women fail to see the link between abuse and their medical conditions (McCauley, Yurk, Jenckes, & Ford, 1998).

A possible explanation as to why the FVU abused women do not perceive problems with their physical health may be related to their experiences in the health care community. One study found that 71% of abused women lied or withheld information about the nature of their injuries sustained from IPV when they sought medical care

(Rodriguez, Quiroga, & Bauer, 1996). These abused women felt that the health care providers' busy schedules left no time for them to ask and deal with the complex problems of domestic violence. The abused women also cited fear of retaliatory violence from the abuser, shame, and embarrassment as reasons not to disclose how they were hurt. Furthermore, low self-esteem of the abused women contributed to feelings that they were somehow responsible for the violence. Gerbert et al. (1996) also reported that abused women perceived health care professionals to be disinterested or unsympathetic towards their needs. Many women felt ignored or trivialized by health care providers. Similar findings were reported by Caralis and Musialowski (1997) who found only 36% of abused women believed strongly that physicians could offer help to control the domestic violence. Even when these abused women told their doctors of the violence, 20% of the doctors did nothing for the women.

Bodily Pain

The results of this research found that at time of helpseeking at a police department, abused women reported poor bodily pain scores ($M=52.52$) that were much lower than norm women ($M=73.59$) (Ware, 1993). Three and six months after helpseeking, the abused women's bodily pain score improved significantly ($p<.0005$) with the greatest improvement observed between the initial and 6-month time interval. At six months, the abused women's bodily pain mean score ($M=76.75$) was actually higher than the norm women's bodily pain mean score. These findings are supported by previous research that found high rates of bodily pain in abused women (Chapman, 1989; Haber,

1985). However, to date, there are no other studies reporting on the pain outcomes of abused women who seek help to end the violence in their lives.

Vitality

Significant results were found for the scale of vitality (VT) with the abused women. At time of helpseeking, the abused women's mean VT score (41.32) was lower than the norm women's VT score (58.43) (Ware, 1993). Over the three and six month time intervals, significant improvements for the abused women were observed in the VT scores ($p < .0005$). The greatest improvement for the VT score was seen between the initial and 6-month interval. By the six-month time period, the abused women's VT score ($M = 56.99$) was close to the norm women's mean score. These findings are like those of the NIJ study with abused women who filed protection orders against their intimate partners and found after 6 months that 92.7% of the women felt better (Keilitz, Hannaford, & Efke, 1997). Other studies also reported that vitality is affected by IPV with abused women having increased feelings of tiredness and poor sleep patterns (Dobbie & Tucker, 1990; Wagner & Mongan, 1998). Furthermore, Sullivan and colleagues (1994) found a significant improvement in battered women's quality of life after receiving advocacy services through a battered woman's shelter.

Mental Health

The initial mental health (MH) mean scores of the abused women who sought help at a police department ($M = 43.28$) were very low when compared to the mean MH

scores of norm women ($M=73.25$) (Ware, 1993), as well as the mean MH scores of patients diagnosed with psychiatric and serious medical conditions ($M=56.90$) (McHorney, Ware, & Raczek, 1993). These results are supported by previous research that indicated abused women's mental health suffers from the effects of IPV as evidenced by high levels of anxiety and depression, suicide attempts, and poor scores on mental health instruments (Bergman & Brismar, 1991; Jaffe et al., 1986; McCauley et al., 1995; Mullen et al., 1988). The MH scores of the FVU abused women improved significantly after helpseeking ($p<.0005$) with the greatest improvements seen between the initial and 3-month interval. At three months, the abused women's mean MH score ($M=63.32$) was approaching the level of the norm women's mean score. However, for the MH scale, there was a slight decrease in the scores between the 3-month ($M=63.32$) and 6-month ($M=62.70$). While this decrease in scores is not significant, it may be indicative of a trend found in a study on patterns of reassault in batterer treatment programs. Gondolf (1997) evaluated four batterer programs by interviewing male batterers and their female partners by telephone every three months for 15 months. Results of this study found that a high percentage of women reported that following the intervention program, the male batterers used controlling behaviors, were verbally abusive, stalked and threatened them. The research concluded that the women may actually be "worse off" following a batterer program (p. 384). The mental health repercussions in terms of the verbal abuse and the fear from the threats and stalking may be substantial.

Emotional Role Functioning and Social Functioning

The initial means scores of the emotional role functioning (RE) ($M=29.32$) and social functioning (SF) ($M=56.93$) scales for the FVU abused women revealed very low results when compared to the norm women's RE mean score of 79.47 and SF mean score of 81.54 (Ware, 1993). In fact, the abused women's scores were also lower than the RE ($M=52.71$) and SF ($M=65.12$) mean scores of patients diagnosed with psychiatric and serious medical conditions (McHorney, Ware, & Raczek, 1993). Other research has also shown that abused women suffer from lack of social support and relationships with others (Dobbie & Tucker, 1990; Sullivan et al., 1992).

Over time, the RE scores ($p<.0005$) and the SF scores ($p<.0005$) improved significantly for the abused women who sought help at the police department. For the SF scale, the greatest improvement was observed between the initial and 6-month time interval with the 6-month SF mean score increasing to 72.14; close to the norm women's mean score. Sullivan and colleagues (1994) found similar results post-intervention for a group of abused women recruited from a battered woman's shelter. At six months following the use of advocacy services, abused women reported increased social support.

For the RE scale, the greatest improvement occurred between the initial and three month time period. Much like the MH scale, the RE scale showed a decrease in score between the 3-month ($M=62.65$) and 6-month ($M=56.22$) time interval. Out of all the SF-36 scales measured in this sample of abused women, it was the RE scale that measured the lowest at the time of helpseeking and never came close to mirroring the norm

women's mean score. In fact, at six months, the abused women's RE mean score was similar to the RE mean score of the very ill patients. Much like the results of Gondolf's (1997) research on the reassault patterns of batterers, these RE scores may indicate how detrimental the emotional abuse of IPV is to abused women's overall health.

Reliability of the SF-36 with Abused Women

This next section of the chapter will discuss the reliability of the SF-36 with abused women who attempted to file charges against an intimate partner. For this study, over time, all eight scales demonstrated reliability estimates that exceeded .80 (see Table 11). However, at the time of helpseeking, two of the reliability coefficients were less than .80; the Social Functioning and Bodily Pain scales. Both of these scales contain only two items which can affect the reliability estimate (Nunnally & Bernstein, 1994). Furthermore, the initial SF-36 scale scores of the FVU abused women indicate they were suffering physically and mentally. Previous research using the SF-36 with various patient populations indicates that the lowest reliability estimates are reported in studies with very ill patients. In fact, the reliability coefficients of these unhealthy patients almost mirror the reliability coefficients of the FVU abused women (see Table 13).

Table 13

Comparison of SF-36 Reliability Estimates Between Abused Women and Patients
Diagnosed with Psychiatric and Serious Medical Conditions^a

SF-36 Scale	Abused Women at Time of Helpseeking (N=90)	Patients (N=45)
Physical Functioning	.95	.93
Role-Physical	.91	.70
Bodily Pain	.76	.75
General Health	.80	.65
Vitality	.80	.80
Social Functioning	.66	.72
Role-Emotional	.85	.81
Mental Health	.84	.88

^aMcHorney, Ware, Raczek, 1993

Conclusions

The following conclusions were determined based on the results of this study of abused women who seek help at a police department:

1. At time of helpseeking at a police department, this sample of abused women reported poor physical and mental health scores on the SF-36.
2. At three and six months following helpseeking at a police department, this sample of abused women reported significantly improved health perception scores for the scales of Bodily Pain, Vitality, Social Functioning, Role-Emotional, and Mental Health.
3. Psychometrically, the SF-36 performed satisfactorily with this sample of abused women.

Implications for Nursing

Based on this study, the following implications for nursing were derived.

1. Abused women suffer physically, mentally, and socially. However, abused women may not perceive a deficit in their physical health or may not want to disclose the deficit. Nurses caring for all women, especially abused women, must assess for physical abnormalities and make their findings known to the female client. Abnormal physical assessment findings should be presented to all women in supportive, compassionate, nonjudgmental and understanding manner in order to foster disclosure of intimate partner violence.
2. Abused women need appropriate referrals to assist them in improving their health status. Types of follow-up care that may be warranted include referrals to: (a)

mental health practitioners that specialize in the treatment of abused women; (b) primary care providers that understand the physical effects of IPV; (c) community agencies that provide support for abused women; and (d) a criminal justice system that can assist and protect abused women.

3. Educate women that taking action against IPV will most likely improve their lives. Teach women that IPV is unhealthy and measures can be taken to maintain health and safety. Teach women to contact the criminal justice system for help if their health and safety is in jeopardy.

Recommendations for Further Study

Based on this study, several recommendations for future research were generated.

1. This study should be replicated using a random sampling technique to increase the generalizability of the findings beyond the study sample.

2. This study should be replicated with a control group of abused women who do not helpseek at a police department in order to further investigate the health outcomes of helpseeking.

3. Further research should be conducted regarding abused women's perceptions of their physical health and whether or not physical assessment detects physical abnormalities. This study indicated that the physical functioning of abused women was not comprised at time of seeking help. Additional research should be conducted to determine if the abused women's perceptions of physical health reflect actual physical assessment findings.

4. Future research with abused women who helpseek at a police department should investigate whether or not health status impacts an abused woman's decision to seek help. Additionally, research should look at other factors that may play a part in abused women's decision to seek help.

5. Conduct a longer longitudinal study to investigate the trend of the six-month decrease in Mental Health and Role-Emotional scores.

6. Investigate the role of nurses in the criminal justice system where abused women seek help. An intervention study where abused women are assessed and followed by a nurse may increase understanding about the health outcomes of seeking help.

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APPENDIX A
Demographic Data Form

CODE# _____ 82

Today's Date _____ Interviewer _____ DVU Incident# _____

Statement taken by officer? YES (1) NO (0) Type? _____

Initial Assessment

A. Name

_____ Last First Middle

_____ Street City Zip Code

_____ / / /
Home Phone Work Phone Pager

_____ Soc. Sec. No. - - D. O. B. / / T.D.L

CONTACTS:

Relative (i.e. mother, sister, child. A person you will be in contact with):

Name _____

Address _____

Home Phone _____ Work Phone _____ Pager _____

Friend/Neighbor/Other:

Name _____

Address _____

Home Phone _____ Work Phone _____ Pager _____

When is a safe time for me to call you? _____

Where is the best place for me to call you? _____

- 1. What is your race?
 - 01 African-American
 - 02 White
 - 03 Latino/Hispanic
 - 04 Asian/Pacific Islander
 - 05 Other _____

2. What is your age? _____

3. Gender? FEMALE MALE
01 02

CODE# _____

4. What is your present relationship with the batterer?

- 01 Spouse/ Common Law Spouse
 02 Ex-spouse
 03 Girlfriend/Boyfriend
 04 Ex-girlfriend/Ex-boyfriend
 05 Same-Sex partner
 06 Ex-same-sex partner
 07 Estranged partner
 08 Other _____

5. What is the highest grade in school you completed? _____

B. Batterer:

Name

Last

First

Middle

Street

City

Zip Code

Home Phone

Work Phone

Pager

Soc. Sec. No.

D. O. B.

T.D.L.

1. What is _____'s race?

- 01 African-American
 02 White
 03 Latino/Hispanic
 04 Asian/Pacific Islander
 05 Other (specify) _____

2. What is _____'s age? _____

3. Gender? FEMALE (01) MALE (02)

4. What is the highest grade in school _____ completed? _____

5. Is _____ working now?

- 01 Yes, full time
 02 Yes, part time
 03 Not working
 04 Going to school

6. Last year was your total family income:

- _____ less than \$5,000 01
 _____ \$5,000 to \$9,999 02
 _____ \$10,000 to \$19,999 03
 _____ \$20,000 to \$29,999 04
 _____ more than \$30,000 05

APPENDIX B

MOS 36-Item Short-Form Health Survey (SF-36)

C. QUALITY OF LIFE QUESTIONS

Now I would like to ask you some questions about how you have been doing in the past 3 months:
(Pull out calendar and locate dates!)

HEALTH questions:

01. In general, would you say your health is: (circle one)

- Excellent 1
- Very good 2
- Good 3
- Fair 4
- Poor 5

02. Compared to 3 months ago, how would you rate your health today? (circle one)

- Much better now than 3 months ago 1
- Somewhat better now than 3 months ago 2
- About the same as 3 months ago 3
- Somewhat worse now than 3 months ago 4
- Much worse now than 3 months ago 5

03. The following questions are about activities you might do during a typical day.
Think about how you feel right now.

(Check only ONE response)

Does your health STOP you from doing any of the following:	Yes, limited a lot	Yes, limited a little	No, not limited at all	
a. Vigorous activities, such as running, lifting heavy objects, playing sports				3a
b. Moderate activities, such as moving a table, pushing a vacuum cleaner, shopping				3b
c. Lifting or carrying groceries				3c
d. Climbing several flights of stairs (3 or more)				3d
e. Climbing one flight of stairs				3e
f. Bending, kneeling, or stooping				3f
g. Walking more than a mile (20 city blocks)				3g
h. Walking half a mile (10 city blocks)				3h
i. Walking 100 yards (2 city blocks)				3i
j. Bathing and dressing yourself				3j

JOB questions:

04. Do you have a job where you earn money? YES (1) NO (0)

PHYSICAL and EMOTIONAL questions:

05. During the **PAST 3 MONTHS**, have you had any of the following problems with your work or job or other regular daily activities as a result of your **PHYSICAL** health (such as aches and pains)?

	YES (1)	NO(2)	
Cut down on the amount of time you spent on job or daily activities			5a
Did less than you would like to			5b
Unable to do all of the activities at home or at job			5c
Had difficulty performing your job or home activities			5d

06. During the **PAST 3 MONTHS**, have you had any of the following problems with your work or job or other regular daily activities as a result of any **EMOTIONAL** problems (such as feeling depressed or anxious)?

	YES(1)	NO(2)	
Cut down on the amount of time you spent on job or home activities			6a
Accomplished less than you would like (at home/job)			6b
Didn't do the job or home activities as carefully as usual			6c

07. During the **PAST 3 MONTHS**, to what extent has your **physical health** or **emotional problems** interfered with your **normal activities** with family, friends, neighbors, or groups?(check **ONLY one**)

Not at all 1	Slightly 2	Moderately 3	Quite a bit 4	Extremely 5

08. How much bodily pain have you had during the **PAST 3 MONTHS**? (check **ONLY one**)

None 1	Very mild 2	Mild 3	Moderate 4	Severe 5	Very severe 6

09. During the **PAST 3 MONTHS**, how much did pain interfere with your normal work (including job and home)? (check **ONLY one**)

Not at all 1	A little bit 2	Moderately 3	Quite a bit 4	Extremely 5

VITALITY questions:

10. These questions are about how you feel and how things have been with you during the **PAST 3 MONTHS**. (Take out calendar and look at dates!)

(Choose ONE response for EACH feeling:)

How much time during the past 3 months:	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time	
Scale from ALL to NONE:	1	2	3	4	5	6	
Did you feel full of life? (Feel great!)							10a
Have you been a very nervous person?							10b
Have you felt so down in the dumps that nothing could cheer you up?							10c
Have you felt calm and peaceful?							10d
Did you have a lot of energy?							10e
Have you felt downhearted and low? (feel very sad)							10f
Did you feel worn out?							10g
Have you been a happy person?							10h
Did you feel tired?							10i
Has your health limited your activities (with friends or relatives)?							10j

GENERAL HEALTH questions:

11. How **TRUE** or **FALSE** is each of the following statements for you:

	Definitely true	Mostly true	Not sure	Mostly false	Definitely false	
Scale from TRUE to FALSE:	1	2	3	4	5	
I seem to get ill more easily than other people.						11a
I am as healthy as anybody I know.						11b
I expect my health to get worse.						11c
My health is excellent.						11d

APPENDIX C
Agency Approval



CITY OF HOUSTON

Houston Police Department

61 Riesner Street Houston, Texas 77002 713/247-1000

Bob Lanier, Mayor

CITY COUNCIL MEMBERS: Helen Hunt Michael J. Harbrough Marsha J. Wong Jewell Don Bonney, Jr. Rob Todd Row F. Driscoll John Helms Felix Frai
John Castillo Grace Guzman Soarez Joe Roach Orlando Sanchez Chris Bell Jason W. Robinson III CITY CONTROLLER: Lloyd Metz

December 1, 1997

C. O. "Bred" Bradford
Chief of Police



Judith McFarlane, R.N., Dr.P.H., FAAN
Texas Woman's University
College of Nursing
1130 M. D. Anderson Blvd.
Houston, Texas 77030-2897

Dear Dr. McFarlane:

I received your correspondence requesting permission to conduct a study of abused women who have sought assistance through the Houston Police Department's Family Violence Unit. I am approving your request.

It is my understanding that the participant's personal information will be kept strictly confidential. However, should any of your staff suspect or observe child abuse, by law it must be reported to Child Protective Services.

I believe this study will provide valuable information so that we may continue to provide assistance to those victims in need. Lieutenant Ken Johnson of the Homicide Division's Family Violence Unit will contact you to make the requisite arrangements. If I can be of further assistance, please let me know.

Sincerely,

C. O. Bradford
Chief of Police

cob/pkl
COP # 97-4468

APPENDIX D

Human Subjects Review Committee Approval

TEXAS WOMAN'S UNIVERSITY
DENTON DALLAS HOUSTON
HUMAN SUBJECTS REVIEW COMMITTEE
1130 M. D. Anderson Blvd., Houston, Texas 77030 713/794-2114

MEMORANDUM

TO: Judith McFarlane, PhD

FROM: HSRC

DATE: January 30, 1998

SUBJECT: HSRC Application

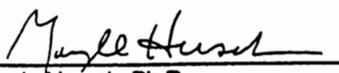
Proposal Title: Characteristics of abused persons that file assault charges

Your application to the HSRC has been reviewed and approved.

This approval lasts for 1 year. If your study extends beyond that time you must notify the Human Subjects Review Committee.

REMEMBER TO PROVIDE COPIES OF THE SIGNED INFORMED CONSENT TO ME WHEN THE STUDY HAS BEEN COMPLETED.

Thank you for your patience in awaiting the committee's decision. The committee extends its best wishes for a productive and very successful project. Should you have any further questions about your application, please contact me at 794-2153.



Gayle Hersch, Ph.D.
CoChairperson

APPENDIX E
Informed Consent

TEXAS WOMAN'S
UNIVERSITY
DENTON/DALLAS/HOUSTON

COLLEGE OF NURSING
Houston Center
1130 M.D. Anderson Blvd.
Houston, TX 77030-2897
Phone: 713/794-2100

CONSENT TO PARTICIPATE

Characteristics of abused persons that file assault charges

I agree to participate in a study about persons that file assault charges at the Family Violence Unit of the Houston Police Department. The purpose of the research study is to determine quality of life measures and the pattern of physical, emotional, and sexual abuse BEFORE as compared to AFTER filing assault charges at the Family Violence Unit. I hereby authorize Dr. Judith McFarlane and graduate registered nurses to: Discuss abuse with me and complete interview questionnaires; the questionnaires will take a total of 25 minutes. I will then choose a day, time, and phone number for Dr. McFarlane or a graduate registered nurse to contact me in 3 and 6 months for a follow-up interview of approximately 20 minutes each to answer the same questionnaires. I understand that Dr. McFarlane will not ask me any questions about child abuse but if I bring up child abuse that has not been reported to Child Protective Services, Dr. McFarlane is required by law to report any new child abuse. If this happens, Dr. McFarlane will talk with me further about reporting procedures.

The procedure(s) listed above have been explained to me by Dr. McFarlane.

I understand that the risks of participation in this study include loss of confidentiality and talking about the abuse may be upsetting. Additional abuse from my intimate partner is a risk. Dr. McFarlane advises that I do not discuss the study with anyone. Although I will not be asked any questions about child abuse, if I report new child abuse, Dr. McFarlane is required to report the abuse.

I understand that there are no benefits to myself from participating in the study; however, I may stop and talk about my feelings at any time and if I request, Dr. McFarlane will assist me in seeking services for the abuse as part of the interview.

I understand that all information I tell Dr. McFarlane will be kept confidential. Only the research team will have access to the data I am providing and all reports of the study will be presented in such a way that I will not be able to be identified. The questionnaires are not part of my record at the Family Violence Unit and will not be shared with anyone other than the research team. All completed questionnaires will be kept in a locked file to which only the researcher has access.

I understand that my participation is voluntary and that I may refuse to participate and/or withdraw my consent and discontinue participation at any time without penalty or loss of services to which I am otherwise entitled.

I understand that I will receive \$20 for each completed interview.

The researchers will try to prevent any problem that could happen because of this research. I should let the researchers know at once if there is a problem and they will help me. I understand, however, that TWU does not provide medical services or financial assistance for injuries that might happen because I am taking part in this research.

If I have any questions about the research or about my rights as a subject, I should ask the researchers. Dr. McFarlane's phone number is 713/794-2138. If I have questions later, or if I wish to report a problem, I may call the researchers or the Office of Research and Grants Administration at 940-898-3375.

Subject's Signature

Date

Witness Signature

Date