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**FACTORS INDICATING A CHANGE IN
BATTERING BEHAVIOR DURING PREGNANCY**

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Helene Kay Halvorson
May 1999

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DEDICATION

This work is dedicated in loving memory

to my mother and father,

Borghild and Hans Halvorson.

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Abstract

A conservative estimate of violence toward women in the United States is that more than two million women are battered every year, 32 percent of whom are revictimized within six months. These statistics make the consequences of battering a significant health problem for women. Early population surveys and clinical studies found that many women were pregnant at the time of battering, yet few studies specifically explored battering in prenatal populations. Significant findings in these studies include rates of physical violence ranging from 4 percent to 17 percent and outcomes such as inadequate prenatal care, low-birth weight infants, fetal injury, and maternal and fetal deaths.

The purpose of this study was to identify factors related to women's experiences of physical battering during pregnancy. A purposive sampling for heterogeneity strategy was used. The sample consisted of 160 third-trimester prenatal patients receiving care in two family practice clinics in a large metropolitan area (approximately one million people). Each woman was surveyed once using three measures. Demographic, socioeconomic, relationship, and attitudinal characteristics of battered and non-battered pregnant women were explored to determine differences between these two groups. It was found that almost two-fifths of the women reported battering during the past year. Over one-fourth of the women who reported battering during the past year reported that they were battered during their current pregnancy. Logistic regression and discriminant analysis procedures were used. Analysis indicated a good model fit ($\chi^2=33.615$, $p=.0023$, $df=14$). The logistic regression model correctly classified 75.52 percent of all women ($\kappa = .38$, $p<.000$). An important but unexpected finding was that almost half of the battered women reported battering only by someone other

than partners. Two major factors differentiating women battered only by partners from women battered only by someone else were forced sex by partners and forced sex by someone else. Eighty-seven percent of the women requested to speak with their doctors about the violence they were experiencing. None of these women had previously identified themselves as experiencing violence. These findings underscore the importance of continued research into battering during pregnancy and suggest an important and routine activity for social work practitioners. Much like we believe screening for child abuse is essential, we must also begin to understand and support routine screening for violence toward women.

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CHAPTER I

INTRODUCTION

RATIONALE

Violence toward women has been recorded throughout the centuries, yet only in the last two decades have concerted efforts been made to understand why it occurs. Among the early studies of battered women only two were population surveys (Straus, Gelles and Steinmetz, 1980; Straus and Gelles, 1985), while the remaining studies were clinical studies of women temporarily residing in battered women's shelters. Women in such shelters self-identify as battered women, presenting a problem for research in that the study findings do not generalize to the entire population. External validity in population surveys is also vulnerable in that only women who are willing and/or able to report their experiences can be counted (Blackman, 1989). Still, researchers have found that 2.1 million women in this country are battered every year, 32 percent of whom are victimized again within six months of an initial episode (National Crime Survey, 1986; Straus et al., 1980).

In the early population surveys and clinical studies of battered women, it was found that many women were pregnant at the time of the battering (Straus et al., 1980; Straus and Gelles, 1986; Gelles, 1990; Bowker, 1983; Walker, 1984; Pagelow, 1984; Dobash & Dobash, 1992; Brush, 1990), yet few studies have specifically explored battering in prenatal populations (McFarlane, Parker, Soeken and Bullock, 1992; Hillard, 1985; Stewart and Ceccuti, 1993; Campbell, Poland, Waller and Ager, 1992). Early retrospective studies on violence toward women reported finding incidence rates of battering during pregnancy as high as 56 percent (Shupe and Stacey, 1987; Bowker, 1983). Clinical studies of prenatal

populations, however, report battering incidence rates as high as 17 percent (McFarlane et al., 1992) and as low as 4.4 percent (Hillard, 1985). Significant findings in these prenatal studies of battering have included outcomes such as inadequate prenatal care (Parker, McFarland, Soeken, Torres and Campbell, 1993); pre-term deliveries (Stewart and Cecutti, 1993; Campbell et al., 1992); low-birth weight infants (Bullock and McFarlane, 1989); and blows to the abdomen, fetal injury, and at times maternal and fetal deaths (Ribe, Teggatz and Harvey, 1993; Helton, McFarlane and Anderson, 1987). These consequences of battering during pregnancy suggest the importance of the problem addressed in this research.

STATEMENT OF THE PROBLEM

Battering during pregnancy is a health risk for both the woman and her unborn child. When a woman becomes pregnant, physiological changes in her body increase the level of vulnerability of both the mother and the fetus. While the structure of the uterus has considerable protective capacity for the developing fetus, a blunt trauma blow to the abdomen of a pregnant woman can result in injury or death of the fetus and the woman (Ribe et al., 1993). Medical researchers estimate the incidence of trauma in pregnancy at 6-7 percent and have found it to be the leading non-obstetrical cause of mortality and morbidity in pregnancy (Agnoli and Deutchman, 1993). Trauma causing the most concern during pregnancy includes blunt trauma blows to the abdomen and penetrating abdominal injuries. Battered women have reported experiencing both injuries during pregnancy (Ribe et al., 1993; McFarlane et al., 1992). Traumatic separation of the placenta from the uterine wall or placental abruption, which may occur from a blunt trauma blow to the abdomen, can result in pre-term labor (Bohn, 1990). Pre-term labor is defined as the onset of labor in patients with intact

membranes which occurs before the 37th week of pregnancy (Ladewig, 1994; Arias, 1993). While maternal morbidity and mortality as consequences of pre-term labor are rare, early labor for the neonate can result in high mortality and frequent and severe morbidity (Arias, 1993). Agnoli and Deutchman (1993) report that "placental abruption is second only to maternal death as the most common cause of fetal death."

Battering often does not begin in marriage or with pregnancy. Clinical studies have found between 21 percent and 51 percent of women who reported battering during courtship (Makepeace, 1981; Roscoe and Benaske, 1985; Seltzer and Kalmuss, 1986). Such findings suggest two pathways to battering during pregnancy exist: battering that begins prior to pregnancy and continues into the pregnancy and battering that begins when pregnancy becomes known. Pertinent to this study is that it is not clear from the existing literature whether or not the male partner's awareness of the pregnancy resulted in a change in the battering experience of the woman (Hillard, 1985). Recent clinical studies have found the site of the battering changed from the head to the abdomen during pregnancy (Stewart and Cecutti, 1993); the frequency of the battering increased during the pregnancy (Bullock et al., 1989; Parker et al., 1993); and when one or both partners did not want the pregnancy, battering during pregnancy resulted (Gazmararian, 1996). The researcher hopes that this study will add to the existing knowledge about battering during pregnancy and facilitate early diagnosis and implementation of clear intervention guidelines, in all prenatal clinics, for women both battered and pregnant.

OBJECTIVES OF THE STUDY

Several questions have been raised, but left unanswered, in both the early and current

studies of women who are pregnant and battered. The literature identifies several possible links between pregnancy and battering such as male partner awareness of the pregnancy, pregnancy wantedness, a change in the frequency of battering, the level of injury, and abdominal battering. Additionally, the literature identifies the demographic variables of age, marital status, race, and educational level as factors that differentiate women who are battered from those who are non-battered (McFarlane et al., 1992; Hillard, 1985; Stewart and Cecutti, 1993). The researcher explored these variables in this study in an attempt to answer the following questions.

- 1) When a woman experiences battering prior to pregnancy, does the battering continue during pregnancy?
- 2) What factors differentiate women who are battered from women who are not ?
- 3) In what way does the wanting of the pregnancy by the woman and/or her partner influence the onset or frequency of the battering?
- 4) Does the woman obtain medical treatment other than normal prenatal care when battered during pregnancy?
- 5) Does the male partner's awareness of the pregnancy contribute to the onset or continuation of battering during pregnancy?

DEFINITIONS

The literature is replete with definitions of the essential terms used in this study. These terms are defined below to facilitate a clearer understanding of what this study means when the researcher refers to violence, domestic violence, and battered woman.

Violence

Researchers in the field of violence note that after 20 years no common definition of "violence" exists (Burgess and Draper, 1989; Gelles and Loseke, 1993). One definition most

frequently cited in the literature is: "Violence has basic elements of behavior, intent to harm, and injury including actual, attempted, or threatened behavior that is intended to cause physical injury or create fear of injury, particularly to force someone to do something and that actually does or is likely to cause injury or pain" (Weis, 1989). Some authors suggest any definition of violence must include the type of violent act, the force with which an act is carried out, the number of repetitions, and the clustering of different acts (Frieze and Brown, 1989; Dutton, 1992). Still other authors suggest the outcomes of battering such as injury, miscarriages, and death need to be considered in any definition of physical violence toward women, particularly pregnant women (Walker, 1984; Ribe et al, 1993; Mercy and Saltzman, 1989). The types of violent acts identified as abuse in the literature are physical, psychological, sexual, and emotional abuse and damage to one's property (Frieze and Brown, 1989; Dutton, 1992). Behaviors labeled as violent in operational definitions include emotional trauma, shouting, angry looks, aggressive gestures and verbal threats (Ptacek, 1988; Adams, 1988); minor acts of violence such as slapping, pushing, grabbing, shoving and throwing something; severe acts of violence such as stabbing, punching, hitting with a fist, trying to hit with things, beating, threatening with a gun or knife, using a gun or a knife and burning (Straus et al., 1980). In this study the researcher explored the physical battering of pregnant women. The term "battered" is used instead of the more encompassing term "abused" to describe women who have experienced physical acts of violence. Minor and severe acts of violence as defined above and the sexually violent act of forced sex are included in this study.

Domestic Violence

In its broadest context, domestic violence has been used interchangeably with the

terms “family violence,” “intra-family violence,” “intimate violence,” and “non-stranger violence” (Weis, 1989; Straus and Gelles, 1986). The participants of violent acts identified in various domestic violence studies cover a wide range from husbands, wives, children, parents, and siblings (Straus et al, 1980), to work associates and non-strangers (Weis, 1989). The term “domestic violence” is more appropriate when referring to all types of victims and perpetrators found within intimate relationships. It has often been used, however, to replace the term “battered women.” Using the term “domestic violence” when referring only to women who are battered is confusing and obscurant (Kaufmann, 1992). In keeping with the focus of this study this research addresses the specific problem of male physical violence toward pregnant women, and the terminology used is intended to reflect that differentiation in context.

Battered women

Battering of women has also been described in various ways, such as wife abuse, wife battering, couples violence, spouse abuse, intimate violence and partner violence (Weis, 1989; Burgess and Draper, 1989; Yllo, 1988). Studies vary concerning whom they include in samples of battered women, i.e., all women, only legal wives, or women living with but not married to their partners. In this study the term “battered woman” is used to describe any woman, married or unmarried, who has a current or past relationship with a male who currently engages in or has engaged in during the past year physical acts of violence toward her. This definition includes current and ex-partners.

CHAPTER II

REVIEW OF THE LITERATURE

CURRENT THEORETICAL PERSPECTIVES

The study of violence toward women, and particularly pregnant women, is in its infancy theoretically and methodologically (Hotaling, Straus, and Lincoln, 1990; Gelles and Loeseke, 1994). No theories have been developed which explain battering during pregnancy.

The earliest effort to attach causation to the problem of violence toward women was psychiatric theory. This theory locates the chief determinants for violence in the personality characteristics of each individual. It suggests that there is something pathologically wrong with the people who "allow" themselves to be battered and the people who batter (Pagelow, 1984). Although no scientific evidence exists to support the contention that violence is due solely to personality traits, psychiatric theory continues to endure as a theoretical explanation for the battering of women (Gelles and Cornell, 1985). It has been used to provide support for victim blaming by describing women as masochistic and sadistic (Pagelow, 1984) and to suggest that when violence occurs partners play an equal role in the violent episode (Straus et al., 1980; Straus and Gelles, 1990).

A sociological perspective on violence argues that the lens for viewing violence should be through social structures that effect people and their behavior (Yllo, 1993). Those social structural influences identified in the literature as affecting violence between intimates are age, sex, socioeconomic position, race, ethnicity, the structure of social institutions, and the family (Gelles, 1993). As in non-intimate violence, research has found violence between intimates to be highest among people between the ages of 18 and 30 (Gelles and Straus, 1988; Straus

et al., 1980). This is the age range during which pregnancy most often occurs. The relationship between sex and physical violence is more controversial. Some researchers suggest that women are disproportionately the victims of adult intimate violence (Kurz, 1993; Yllo, 1988), while others argue there are far more women who use violence than studies indicate (Straus, 1991). When severity of the violence is incorporated into the study, however, it is women who experience the most severe injuries (Straus and Gelles, 1988).

While the battering of women cuts across all social and economic groups, data suggest it does not do so evenly. Battering appears to be highest among the poor, the unemployed, and those holding low status jobs (Gelles and Straus, 1988), all of which can result in high stress situations. These factors are also conducive to women remaining in the battering situation in that they do not have the resources with which to leave. However, it is the violence found in the lower socioeconomic strata which comes to the attention of public agencies most often and is therefore more visible and available to research studies than the violence occurring in more affluent homes which may only be known to private agencies and institutions (Hampton, 1991).

The structure of the family as a social institution has been identified as a strong influence on the occurrence of violence within families (Gelles, 1993). Straus and Gelles (1990) suggest this occurs because the structure of the family is such that the intimate nature and relationships between family members are conducive to arousing conflict, which when unresolved, can result in violence. Sociologists frequently use a combination of theories to explain violence toward women. Social learning theory, which hypothesizes that people learn behavior, and thus violent behavior, in their homes of origin where they witnessed or

experienced violence directly, has received much attention in the literature (Bandura, 1979; Hotaling and Sugarman, 1986; Walker, 1984; Seltzer and Kalmuss, 1988; Gelles and Cornell, 1990; Herzberger and Tennen, 1988). The witnessing of violence as children in the homes of origin has been found to be an important predictor for future violence by males (Hotaling and Sugarman, 1986). Still other researchers have suggested resource theory (Goode, 1971) as an explanation for intimate violence, maintaining that one resorts to violence when one has no other personal resources or perceives oneself to have no other resources with which to exact compliance. An essential aspect of this theory is resource allocation. Feminist researchers (Dobash and Dobash, 1992; Yllo and Bograd, 1988) argue the unequal allocation of resources by gender results in a greater capacity for the male (who has more resources and is physically stronger) to dominate or exert power over the female (who generally has fewer resources).

Social control theory has been used in the literature differentially to support the two social science perspectives that dominate the violence literature today: the family violence perspective (Straus et al., 1980; Gelles and Straus, 1985) and the feminist perspective (Dobash and Dobash, 1992; Yllo and Bograd, 1988; Davis and Hagen, 1992). The family violence perspective suggests that, when the social structures within society such as families or other institutions do not intervene to stop the violence or are not effective as social control agents in increasing the costs of using violence, the chances of the batterers stopping the violence are decreased (Fagan, 1983; Gondolf and Fisher, 1988). Feminist researchers, however, suggest that social control theory supports the argument that violence is a form of coercive control or power used by a man to dominate the generally weaker woman, thereby

exacting her compliance (Serra, 1993). The only risk factor consistently found to discriminate battered women from non-battered women is the witnessing of violence as children in their homes of origin (Herzberger and Tennen, 1988; Straus and Gelles, 1990; Hotaling and Sugarman, 1986). Other factors researchers suggest are correlated with the battering of women are age, socioeconomic status, education, employment opportunities, parenting responsibilities, and self-esteem (Hotaling and Sugarman, 1986; Gelles, 1990; Forte et al., 1996).

Marital rape or sexual assault of wives by their husbands is a separate yet related area of physical violence women experience, but it has received limited attention by researchers (Gelles, 1977, Gelles and Loseke, 1993). One of the earliest efforts to identify this area was a study of 80 families by Richard Gelles (1976). The intent of the study was to explore the subject of violence between husbands and wives; however, during the interviews four wives also reported sex-related violence. The most consistent finding was that these women felt they had been forced into having sexual relations with their husbands. More recently, Finkelhor and Yllo (1985) found in their study of 323 women living in Boston that 10 percent of the women reported forced sex by their husbands or partners. About half these women reported that violence accompanied the forced sex and about three percent of the women also reported stranger rape. In a third study of 930 women living in San Francisco, of the 644 married women, 14 percent reported experiencing marital rape (Russell, 1982).

LIMITATIONS OF PREVIOUS RESEARCH

With the exception of two population surveys that specifically examined all types of violence between intimates, most research studies on physical violence toward women have

been based on small clinical samples (Straus et al., 1980; Straus and Gelles, 1985; Yegidis, 1992; Stets et al., 1990). While findings based on small clinical samples do not generalize to the entire population, a review of the population surveys also finds methodological problems. For instance, the First National Household Survey (Straus et al., 1980) randomly sampled 2,143 individuals in face-to-face interviews, with a 65 percent response rate. The amount of violence that might be found in the remaining 35 percent who refused to participate is unknown (Straus et al., 1980; Blackman, 1989). Possible explanations for why this 35 percent refused to participate can be seen in the research which has shown that women who are battered are afraid to talk about the battering, are unable to do so, or do not realize or interpret their experiences as battering (Blackman, 1992; Bograd, 1988). Representation in this national survey was compromised further by the definition of the targeted population which, for the 1975 survey, was two-parent households with children between 3 and 17 years of age. In 1975 only 34 percent of all American households were two-parent households with at least one child living at home (Blackman, 1989; The United States Department of Commerce, Bureau of Census, 1977). Two-parent households with children younger than three years, single parents, and childless couples were left out, probably underestimating the number of families in which some form of violence could be found (Straus et al., 1980; Yllo, 1988; Blackman, 1989).

CURRENT INTERVENTION MODELS

Of the intervention models existing today, the model used most often in clinical programs is the cycle of violence model (Walker, 1984). This model is based on social learning theory, learned helplessness theory, and the traditional sex role socialization theory.

It proposes that there are three phases in the violence process which the model's author calls a cycle. The model tends to locate the responsibility for the cycle of violence continuing on the woman's reaction to the battering. Walker (1984) suggests that, when a first phase battering incident occurs, women feel they have in some way failed in their traditional roles. The model's author further suggests that to manage this sense of failure, women tend to minimize and deny their own experiences. The battering phase is followed by a period of calm, called the honeymoon phase, which in turn is followed by an escalation phase, and the cycle begins again. The model's author argues that as this cycle continues battered women learn to feel helpless in being able to stop the violence. While studies do find that many women exhibit symptoms identified in the cycle of violence model, other authors suggest that to rely solely on this model is to deny the totality of the experiences of the individual women (Farrington, 1980; Bowker, 1983; Gondolf and Fisher, 1988). Still other authors suggest that the cycle of violence model does not address the use of coercive control by the male, which may account for why battered, pregnant women enter prenatal care late in their pregnancies (Bullock and McFarlane, 1989; Stewart and Cecutti, 1993). An alternative to the cycle of violence model, the survivor model (Gondolf and Fisher, 1988), characterizes battered women as active survivors who increase their "help seeking" behavior as the frequency and intensity of the violence increases. Gondolf and Fisher (1988) suggest when women are not able to leave battering situations, it is not because they have not sought help, but rather the agencies and services to which they turned for help failed them in their attempts at help seeking.

The interpretive model is gaining increasing consensus in intimate violence research (Bograd, 1988; Herzberger and Tennen, 1988) and contends that as individuals we construct

specific meanings for specific situations. These individualized meanings may differ significantly from abstract cultural meanings (Bograd, 1988). Whether an act is perceived as "normal" would then often depend upon the context in which that act occurred. For instance, a woman who lives in a home where violence used by a male partner as a mechanism of power and control is an accepted norm may not perceive the violent act as abnormal. This may be one reason for the finding that battered women do not inform their medical care givers of the violence or do not identify themselves as battered (McFarlane et al., 1992).

A theoretical model for explaining why violence occurs and that provides a good fit with the ecological perspective of the social work profession is the power and control wheel model. This model was developed by the Domestic Abuse Intervention Project in Duluth, Minnesota. It provides an alternative to other models in identifying violence as a tactic of perceived entitlement and power, which is gender specific, rather than as a conflict tactic, which tends to be gender neutral (Yllo, 1993). The model is based in behavioral psychology, social exchange theory, and social learning theory. It places the violence women experience within an ecological, or environmental, context. This model suggests men batter because they believe they have much to gain from the violence, such as control and isolation of their female partners, their partners' compliance, and feelings of strength and power. Graphically depicted as a wheel, the model shows an outer rim labeled physical and sexual violence. This rim is connected to the hub of the wheel where male power and control are located by a series of connecting links, or spokes. The power and control wheel suggests these "spokes" are used as violence tactics of the male toward his female partner to maintain a position of power and control within the family. The spokes include: 1) coercion and threats, 2) isolation, 3)

intimidation, 4) emotional abuse, 5) minimizing and denying, 6) economic abuse, 7) male privilege, and 8) the mother's concern for the children.

CURRENT RESEARCH ON VIOLENCE AND PREGNANT WOMEN

The earliest effort to look at violence during pregnancy was an exploratory study of members of 80 families (40 selected from police and social agency files and 40 neighbors selected as control subjects) in which the researcher reported that 55 percent of the 80 families studied acknowledged at least one incidence of violence toward the wives (Gelles, 1975). Of the 44 families who reported prior battering, 23 percent reported the violence occurred while the wife was pregnant.

Recent research specific to battering during pregnancy indicates a change may occur in the battering behavior of the male batterer toward the female when she becomes pregnant. In a cross-sectional survey of 742 women seen in a large University obstetric clinic data were collected for one year during the prenatal screenings of women who attended the obstetric clinics. One direct question about hitting was incorporated into the general health questions about pregnancy. Women who responded positively to this direct question were questioned further. Of the total sample of 742 women, 81 (10.9%) reported battering prior to the pregnancy. Thirty-three (4.4 % of the total sample, or 40.74% of the women who experienced prior battering) women admitted being battered during the current pregnancies. A comparison group consisted of 247 women seen for prenatal care who denied previous or current battering. Demographic data of the battered group and the comparison group showed that the group of women who were battered were significantly older, although the mean age for both groups was still under 25 years of age (battered group=24.6 years; comparison group=21.5

years). In this clinical study, Hillard (1985) found that 21 percent of the women reported an increase in the amount of battering during pregnancy; 43 percent reported no change in the amount of battering when the woman became pregnant; and 36 percent reported a decrease in the amount of battering during pregnancy. Based on this finding, the researcher suggested the man's awareness of the pregnancy may have been a precipitating factor in the increase of battering. Forty-nine percent of the battered and pregnant women reported injuries severe enough to require medical treatment. The primary battering site was reported as the head by 99 percent of the women. This study did not determine if the battering site changed during pregnancy.

Three studies conducted by researchers at Texas Women's University from 1985 to 1993 included a combined total of 1,570 pregnant women seen in public and private prenatal clinics in Houston, Texas, and Baltimore, Maryland. Of the women, 261 (17%) reported being battered during their current pregnancy. The initial study was a cross-sectional survey of 292 women randomly selected from six public and two private prenatal clinics in Houston, Texas, a metropolitan area with a population exceeding 3 million (Helton et al, 1987). Approximately 40 patients from each of the six randomly selected clinics were interviewed. The private prenatal clinics were convenience samples. The data were collected by nurses in the prenatal clinics. Demographic data were obtained, as well as information about whether or not the respondents were in relationships with male partners who threatened or were physically violent toward them. The sites of the battering incidents were obtained as well as the need for medical treatment. Two of the selected respondents refused to participate. Of the 290 women surveyed, 24 (8%) reported battering during the current pregnancy and 44 (15%)

reported battering during the year prior to the pregnancy. Eight (33.3%) of the 24 currently battered women sought medical attention for the battering and seven (29%) reported the battering increased during the pregnancy. Twenty-one (87.5%) currently battered women reported prior battering. Such findings have led researchers to support prior battering as a predictor of battering during pregnancy (Campbell et al., 1992; Stewart and Cecutti, 1993; McFarlane et al., 1992; Lazzaro and McFarlane, 1991).

The second study (Bullock and McFarlane, 1989) was completed on a sample of 589 post-partum women from one public and two private hospitals. At the public hospital, the 289 women who were randomly selected represented 13 percent of the total population who delivered at the public hospital. The remaining 300 women surveyed represented 60 percent of the total population who delivered at the two private hospitals. The data were collected by use of a non-standardized study questionnaire administered by a nurse within 24 hours of delivery. The purpose of the study was to determine the incidence of battering in the population and the effect of battering on the incidence of low birth weight. Of the 589 women surveyed, 120 (20%) reported being battered during the current pregnancy [40 (16.6%) of the 300 women surveyed at the two private hospitals and 80 (38.2%) of the 289 women surveyed at the one public hospital]. The percentage of low-birth weight babies born to battered women (12.5%) was significantly higher ($p \leq 0.02$) than the percentage of low-birth weight infants born to non-battered women (6.6%). At the private hospitals, 17.5 percent of the battered women delivered low-birth weight infants compared to 4.2 percent of the non-battered women who delivered low-birth weight infants. This was a statistically significant finding ($p \leq 0.001$). Whether this might be a spurious finding is an unknown since the authors

did not discuss if they had controlled for other variables found to be related to low birth weights (Combs-Orme et al., 1993).

In the third study (McFarlane et al., 1992), the design was a stratified, prospective cohort analysis of 691 pregnant women served in prenatal clinics in Baltimore, Maryland, and Houston, Texas. The purpose of the study was to compare the effectiveness of a direct clinical assessment tool with research questionnaires in determining the frequency and severity of physical abuse during pregnancy and its association with late entry into prenatal care. All respondents completed the Abuse Assessment Screen (AAS), the Conflict Tactics Scale (CTS), and the Index of Spouse Abuse (ISA). Additionally, all battered women completed the Danger Assessment Screen (DAS) to determine their potential danger of homicide. The women were surveyed at their first prenatal visit and again during each trimester throughout the pregnancy. Of the respondents, 394 women (57%) were between the ages of 20 and 29 years and 214 women (31%) were between the ages of 13 and 19 years. On the AAS, 117 (17%) women reported battering during the current pregnancy. Of the 117 women, 26 were teenagers and 91 were adults. Women who were identified as abused on the AAS, also scored higher on the ISA, and similar patterns of abuse by ethnic groups were found on the CTS, ISA, and the DAS. The researchers found battered women were twice as likely to begin prenatal care in their third trimester of pregnancy as non-battered women. Sixty percent of the battered women reported recurrent episodes of battering, and white women were found to experience the most severe episodes of battering. This study also asked about battering by multiple perpetrators during pregnancy and found the women reported battering by both their partners and someone else. The percentage of women battered by someone other than their

partners was not noted; however, the researchers did note that the other batterers were reported to be either ex-husbands, ex-boyfriends, or in the case of the woman under 18 years of age, the parent. The head area was the primary battering site reported in this study.

A final study pertinent to this research was a cross-sectional survey of 548 pregnant Canadian women. The women were at least 20 weeks pregnant and were attending prenatal clinics or were admitted to hospitals for delivery (Stewart and Cecutti, 1993). Equal numbers of women were selected from each of the five survey sites. The mean age of the women was 29 years and the mean gestational age was 30 weeks. A control group was identified from the women who were surveyed and did not report any battering at any time before or during their pregnancies. The data were obtained once from self-report questionnaires. The instruments used to collect the data included the study questionnaire, the General Health Questionnaire (GHQ), and the Fetal Health Locus of Control (FHLC). The purpose was to determine the prevalence of battering during late pregnancy and to investigate how battered women and non-battered women differed on demographics, health habits, psychological distress, and attitudes about fetal health.

In the study, 60 women (10.9%) reported battering prior to the current pregnancies and 36 women (6.6%) reported battering during the current pregnancies. Thirty-one (86.1%) of the 36 pregnant, battered women reported battering prior to the current pregnancies and 5 (13.9%) reported battering began during the current pregnancies. Twenty-three women (63.9%) reported the frequency of the batterings escalated during the current pregnancies. Twenty-four (66.7%) of the 36 women reported that they received medical treatment for their injuries, but only one woman told her primary care provider about the violence. The types of

injuries reported by the women included pneumothorax, stab wounds, concussions, dental injuries, bruises, abrasions, fractures, perforated eardrums, vaginal bleeding, and premature labor.

The study respondents were found to be significantly different from the control group of non-battered, pregnant women ($p \leq 0.001$) in that the study group tended to be younger, unmarried, had not completed high school, were unemployed, and their pregnancies were unplanned. Also, they had more tobacco, alcohol, prescribed, un-prescribed, and illicit drug usage during their pregnancy. The mean age of the women battered during the current pregnancy was 22.6 years ($SD=6.8$ years, range=14 to 40 yrs). The primary battering site reported was the abdomen. This is a change from the studies discussed above, which reported the primary battering site as the head and face. Other studies of battered women in shelters (Pagelow, 1984; Walker, 1984) have reported women retrospectively report having been hit in the abdomen during pregnancies with resultant complications, including death of the fetus.

THE POWER AND CONTROL WHEEL MODEL AND PREGNANCY

This section discusses how the connecting links identified in the power and control wheel model are used to explain violence during pregnancy. Studies of pregnant women have found that women who are both battered and pregnant tend to enter prenatal care later in their pregnancies, leading researchers to suggest this may be due to the male's use of isolation and threats (the use of the connecting links — coercion, threats, and isolation) to intentionally keep his partner from family, friends, and/or outside agencies (Parker et al., 1993) such as medical clinics (McFarlane et al., 1992).

An alternative explanation for why battered women enter prenatal care late in their

pregnancies includes the possibility that battered women may be embarrassed or ashamed of the visible signs of the battering. Another explanation is that battered women may externalize their sense of having control over the health of their unborn babies. This explanation suggests battered women believe their babies' healthy birth would be due more to chance than to any care they might take of themselves or their unborn children (Stewart and Cecutti, 1993). Still other studies have found that battered, pregnant women minimize or deny (the use of the connecting links — minimizing and denying) their experiences of battering and that battered women do not voluntarily report the violence (denial) to their medical care givers (Stewart and Cecutti, 1993; Parker et al., 1993).

Several studies of battered women and battered, pregnant women have found they have fewer necessities of life, such as adequate housing or baby equipment (the use of the connecting link — economic abuse) when compared to non-battered pregnant women (Campbell et al., 1992; Stewart and Cecutti, 1993). While a few studies (Gelles, 1974; Finkelhor and Yllo, 1985) have looked at whether battered women also experience forced sex (the use of the connecting links — intimidation and male privilege), no study has explored whether women experience forced sex and battering during pregnancies.

LIMITATIONS OF PREVIOUS STUDIES

Although much has been learned over the past 20 years about violence toward women, the field still remains underdeveloped. Research regarding the extent of the problem of battering during pregnancy has just begun. In clinical studies, physical battering prior to pregnancy and battering during pregnancy have often been combined and reported as the battering incident rate during pregnancy (McFarlane et al., 1992), reasoning that prior

battering is a predictor for battering during pregnancy (Campbell et al., 1992; Helton et al., 1987). Definitions of terminology, such as what a decrease in battering means and appropriate measurements of which factors may precipitate a decrease in battering have not been developed. Further, studies have not explored whether battering was by a partner, someone other than the partner, or by both the partner and someone else. When non-standardized questionnaires have been used, reliability and validity estimates for the measurement instruments are not available. Finally, no studies have explored factors differentiating women battered only by their partners, those battered only by someone other than their partners, and those battered by both.

An inherent problem in clinical studies of battered women, whether or not they are pregnant, is that the findings cannot be generalized to the larger population. The clinical studies that have begun to examine battering during pregnancy have studied incidence and prevalence rates to determine how many women are battered during pregnancy and how often (Campbell, 1991; Dutton, 1992; Yllo, 1990). Examples of variables explored in studies of battered, pregnant women include socioeconomic status, maternal age at time of pregnancy, marital status, underemployment and/or unemployment, substance abuse, and depression (Campbell et al., 1992; Bullock et al., 1989; Parker et al., 1993; Stewart and Cecutti, 1993). However, these studies have not explored the timing of the initiation of the battering. Further, whether the pregnancy was wanted by either of the partners has received limited attention (Gazmararian, 1995), as has whether battered, pregnant women also experience forced sex (Gelles and Loseke, 1993). Nor have these studies explored the relationship between an increase in the severity and frequency of violent acts and the need for medical care due to

battering during pregnancy. Although the male's awareness of the pregnancy has been suggested as a factor in battering during pregnancy, it has not been studied. Finally, previous studies have not asked the women who were battered during pregnancy by their partners whether or not they were battered before pregnancy by the same partners, or if the prior battering was by someone other than the current partners.

Therefore, the initial intent of this study was to look at the following research hypotheses:

- H1 The male partner's awareness of the pregnancy of his female partner is a predictor of the initial onset of battering.
- H2 The male partner's wantedness of the pregnancy is a predictor of the initial onset of battering.
- H3 The awareness of pregnancy by the male partner is a predictor of an increased frequency of battering.
- H4 The unwantedness of the pregnancy by the male partner is a predictor of an increased frequency of battering.
- H5 The male partner's awareness of the pregnancy is a predictor of a level of injury requiring medical treatment.
- H6 The male partner's unwantedness of the pregnancy is a predictor of a level of injury requiring medical treatment.
- H7 The male partner's unwantedness of the pregnancy is a predictor of physical battering of the abdomen.
- H8 An increased frequency of battering and abdominal battering are predictors of

a level of injury requiring medical treatment.

During the study two additional questions surfaced as important. Those questions are as follows:

1. Can predictors be identified which differentiate battered women from non-battered women?
2. Which factors differentiate women who are battered only by their partners from those who are battered only by someone other than their partners?

CHAPTER III

METHODOLOGY

SELECTION OF THE SAMPLE

The subjects in this study were chosen from two university-affiliated family practice clinics in a large metropolitan area with approximately 1,000,000 population. These two sites were chosen because their demographic profile contained a cross-section of the population served in this community and this was a population of women who had not previously identified themselves as battered. The two survey sites served 1,000 prenatal patients in 1995, of which approximately one-third were third-trimester prenatal patients. Only women in their third trimester of pregnancy were surveyed because research has shown that women who experience violence typically do not seek early prenatal care, nor do they report the violence until late in their pregnancies. During the study in the summer of 1996, the researcher identified 273 such women at the two survey sites. A total of 164 women (60%) agreed to participate in the survey. Four subjects were interrupted during the survey to see their doctors and never returned to complete the questionnaires, leaving 160 (58.6%) completed surveys. Of the 109 patients who were not surveyed, 42 women left the clinic before the researcher saw them; 35 never kept their prenatal appointments; 24 refused to participate; and 8 did not speak English.

DESIGN

The research design was a cross-sectional survey with purposive convenience sampling for heterogeneity. The researcher chose a model of deliberate sampling for heterogeneity to increase external validity (Cook and Campbell, 1979; Henry, 1990). The

study sample was chosen based on the racial population of the two clinics surveyed. In 1995 the racial composition was 49.6 percent white, 48.8 percent black, and 1.6 percent other. The study sample in 1996 was 48.8 percent white, 48.1 percent black, and 3.1 percent other. Each week the researcher was given a computer-generated list of potential subjects attending prenatal clinics the following week. The clinic manager initially agreed to identify potential subjects when they appeared for their prenatal visits and request that they speak to the researcher. However, because the clinics did not keep an accurate listing of all prenatal patients, the researcher identified potential subjects by reviewing patients' charts before the start of each clinic. Once potential subjects were identified, the researcher explained the study privately to each subject to determine her willingness to participate.

Upon agreeing to participate in the study, the researcher provided each subject with a consent form and three explanatory pages. The first page contained an explanation of the study the subjects could take with them after they had completed the survey. This page did not contain the name of the subject. A second page explained the study was exploring the way in which women think about and experience their current pregnancies. The purpose of the second page was to provide any battered woman an explanation of the study she could share with her parent or partner. This was intended to keep from placing them in greater danger of increased violence. Both pages explained the study was completely voluntary and their refusal to participate or withdrawal from the study would not jeopardize their receipt of services from the clinic. The researcher explained to the subjects they could take either or both explanatory pages with them after completing the questionnaires. A third page, which each subject was asked to sign if she agreed to participate in the study, contained the study

identifier title UT-HH. The title of this page differed from the title on the first two explanatory pages to assure anonymity to the subjects. A fourth page asked each subject if she wished to speak to her primary care physician about any concerns during her pregnancy. The researcher explained to each woman that signing the fourth page meant she wanted to talk with her doctor about the violence she was experiencing. A subject signed or did not sign this page, folded it, and placed in a sealed envelope. The envelope was given to the clinic social worker, who gave the form to the appropriate doctor. This process allowed the participant's physician to know that his or her patient was experiencing battering, but did not allow the researcher to identify the participant. The clinic social workers kept an accurate count of the number of women who requested to speak to their physicians and provided the numerical information to this researcher.

This multi-page process insured that no document or piece of a document existed which could connect the study to the participant. The signed third page is kept by each clinic director in a locked file cabinet in his or her office. The clinic directors are the only persons with access to the signed consent forms. The University of Tennessee, Knoxville Internal Review Board approved this study. All respondents, age 18 and older, who agreed to participate were surveyed once during their third trimester of pregnancy. Once consent forms were signed and the subjects understood the explanation of the study, each subject was given a set of three questionnaires to complete. These questionnaires were the Hudson Partner Abuse Scale: Physical, the Abuse Assessment Screen, and the study questionnaire. If a subject was unable to read for any reason, the researcher read each question to her. This was necessary for only one subject.

Before the study began, the researcher developed a protocol for participants who became upset over the content of the questions or those who wished to speak further to someone about their experiences. The plan was to refer the subject to the clinic social worker if this occurred. No subject became upset over the content of the questions during the study. Several other facilities served as referral sources for the clinic social worker. The researcher had contacted these agencies before the survey to inform them that a study on violence during pregnancy would be undertaken and a referral would be made to their agencies when deemed appropriate by the clinic social worker. Any participant who experienced discomfort with the survey process was provided the opportunity to withdraw from the study without penalty of prejudice or loss of services within the clinic. The researcher gave all women information about battering and telephone numbers of services for battered women, in addition to several telephone numbers for services for new mothers.

VARIABLES AND SURVEY INSTRUMENTS

This study used three instruments to obtain data from the subjects. These instruments included the Study Questionnaire, the Hudson Partner Abuse Scale: Physical (PASPH) (Hudson, 1992), and a modified version of the Abuse Assessment Screen (Nursing Research Consortium on Violence and Abuse, 1992). The following discusses each variable and the manner in which the data were gathered.

Battering status: This variable determines whether a subject was ever physically hit, slapped, punched, kicked, knifed, or otherwise injured by her partner or someone other than her partner during the past year. It was the intent of the researcher to use the PASPH to determine whether a subject had been battered by her partner during the past year and to

determine the level of severity of the battering. This scale is a 25-item self-report measure of the severity and magnitude of physical violence. The violence is rated on a seven-point scale. Response alternatives range from "never" to "all of the time." The possible range of scores is 0 to 100. The instrument asks specifically whether women have been hit, slapped, pushed, shoved, threatened with a gun or knife, been shot or knifed or had their hair, arms, fingers, or other limbs pulled or pinched during the past year. No clinical cut-off point is established for this scale, although the developer has suggested it may be as low as 15 points (Hudson, 1992). The scale has good test-retest reliability; excellent face, concurrent, and construct validity; and internal consistency reliability of .90 or better (Bloom, Fischer and Orme, 1994). No studies were found which used the PASPH version to survey battered or pregnant, battered women (see Appendix A).

Many women in this study were found to be battered only by someone other than their partners and therefore did not fill out this questionnaire. It was also found that the instrument was not sensitive enough to detect the severity of the violence the pregnant women were experiencing. Consequently, the researcher used the PASPH only to identify whether women were battered by their partners.

Abdominal battering: This variable addresses specifically whether the subject was hit in the abdomen during her pregnancy. A modified version of the Abuse Assessment Screen (Nursing Research Consortium on Violence and Abuse, 1992) was used in this study to determine the site of battering (see Appendix B). This instrument is a clinical assessment screen that requests information on the site of the battering, the number of times the woman was hit, and if the fetus was injured. No psychometrics were provided in the studies that used

this screen; thus, no reliability or validity estimates are available for this instrument. Researchers at the Texas Women's University have used the Abuse Assessment Screen primarily in their studies of battered, pregnant women. The physicians and medical personnel at the two survey sites were familiar with this screen.

Data on the remainder of the variables were collected using the Study Questionnaire (see Appendix C).

Marital status: Marital status and relationship to the baby's father were determined with two questions. The first question asked whether the subject was married or single and living with the baby's father and was determined by a single closed question with four response alternatives: 1) married, living with the baby's father, 2) married, not living with the baby's father, 3) single, living with the baby's father, 4) single, not living with the baby's father.

Whether the current partner was the baby's father: The second question was a single closed question with two response alternatives (yes or no) that determined whether the current partner was the baby's father.

Time of battering: A series of questions was used to determine whether the battering was a) only before pregnancy by the subject's partner or by anyone other than her partner, b) only during pregnancy by her partner or someone other than her partner, c) began before the pregnancy and continued into the pregnancy by either her partner or anyone else.

Injury level from battering during pregnancy: A series of questions was used to determine whether the subject received medical attention for herself, her fetus, or both her and her fetus for an injury due to the battering.

Pregnancy awareness: This variable determined whether the subject believed her partner was aware of the pregnancy (yes or no).

Pregnancy wantedness-male: This variable referred to how much the subject believed her partner wanted the pregnancy. It was determined by a single closed question with four response alternatives: 1) a lot, 2) somewhat, 3) a little, and 4) not at all.

Pregnancy wantedness-female: This variable referred to how much the subject wanted the pregnancy and was also determined using a single closed question with four response alternatives: 1) a lot, 2) somewhat, 3) a little, and 4) not at all.

Change of frequency: This variable addressed whether the battering increased, decreased, or stayed the same after the pregnancy became known by the partner.

Employment status: Employment status was determined using one closed question with six response alternatives: 1) working, full-time, 2) working, part-time, 3) not working but looking for work, 4) homemaker, full-time, 5) student, working part-time, and 6) student, not working.

Total household income: Total household income was determined using a single closed question with five response alternatives.

Available income: Total household income available to the subject for her needs was determined by a single closed question with four response alternatives.

Partner forced sex: A single closed question was used to determine whether the subject had been forced sexually by her partner.

Other forced sex: A single closed question was used to determine whether the subject had been forced sexually by someone other than her partner.

Age: Respondents reported their dates of birth, which were used to calculate the women's ages at the time of the survey.

Educational level: The number of years of formal education each subject had attained at the time of the survey was determined using a single closed question with four response alternatives: 1) less than high school, 2) high school graduate or GED, 3) some college, and 4) college graduate.

Race: The racial status of each subject was determined using a single closed question with four response alternatives: 1) white, 2) African American, 3) Asian American, and 4) other.

The variable, Battered, was used to separate the women into two groups: women who had not been battered during the past year and those who had been battered during the past year. A second variable, time of battering, was used to divide the women who had experienced battering during the past year into those who were battered before pregnancy only, battered during pregnancy only, and battered before and during pregnancy.

After cleaning the data and running summary statistics, the following two additional variables were created and used for the analysis.

Identity of the batterer: A series of questions was used to determine whether the woman was battered by her partner only, someone other than her partner, or both her partner and someone other than her partner.

Living status: One closed question with four response alternatives was used to determine whether the subject was living with the father of her baby.

DATA ANALYSIS

The researcher's original intent was to examine predictors of battering during pregnancy. However, the data did not allow for the examination of the original hypotheses. In the next two chapters, the following analyzes are discussed. The first analysis chapter describes the overall sample in terms of several categories of characteristics which include: demographic characteristics such as race and age of the respondents; socioeconomic characteristics such as the level of education of the subjects, their total household incomes, the amount of income they felt was available to themselves for spending, and whether or not the respondents were employed; relationship characteristics, which included whether the respondents were married or single and whether their current partners were their babies' fathers; and attitude characteristics, which included how much the pregnancies were wanted by the subjects and the subjects' belief about how much their partners wanted the pregnancies.

A logistic regression was run using the list of variables in Table 3.1 to compare differences between battered women and non-battered women. Battered was the dependent variable in the logistic regression.

Table 3.1 LOGISTIC REGRESSION VARIABLE LIST

VARIABLE	VARIABLE VALUE
Battered	1. Battered 2. Not battered
Available income	1. None 2. Very little 3. Enough 4. A lot
Living with baby's father	1. Yes 2. No
Current partner is baby's father	1. Yes 2. No
Pregnancy wantedness-female	1. A lot 2. Somewhat 3. A little 4. Not at all
Pregnancy wantedness-male	1. A lot 2. Somewhat 3. A little 4. Not at all
Partner forced sex	1. Yes 2. No
Other forced sex	1. Yes 2. No
Race	1. White 2. Other than white
Total household income	1. Under \$10000/year 2. \$10001-20000/year 3. \$20001-35000/year 4. \$35001-50000/year 5. Over \$50000/year

The second analysis chapter discusses the differences among only the battered women by whom their batterers were partner, other, or both. Discriminant analysis was run using the variables listed in Table 3.2 with identity of the batterer as the dependent variable to determine if differences existed between women battered only by their partners and women battered only by someone other than their partners.

Table 3.2 DISCRIMINANT ANALYSIS VARIABLE LIST

VARIABLE	VARIABLE VALUES
Identity of batterer	1. Partner 2. Other 3. No battering
Current partner is baby's father	1. Yes 2. No
Pregnancy wantedness-female	1. A lot 2. Somewhat 3. A little 4. Not at all
Pregnancy wantedness-male	1. A lot 2. Somewhat 3. A little 4. Not at all
Marital status	1. Married, living with baby's father 2. Married, not living with baby's father 3. Single, living with baby's father 4. Single, not living with baby's father
Partner forced sex	1. Yes 2. No
Other forced sex	1. Yes 2. No
Available income	1. None 2. Very little 3. Enough 4. A lot

CHAPTER IV

RESULTS, PART I

BATTERED AND NON-BATTERED WOMEN

This chapter describes the characteristics of the total sample and compares battered and non-battered women.

SAMPLE CHARACTERISTICS

The study sample includes roughly equal percentages of white and African-American women and a small percentage who were Asian-American women. The sample percentages were very similar to the total prenatal clinic population percentages of 49.6 percent white, 48.8 percent African American, and 1.6 percent other. It was not surprising to find most women were under the age of 25, with decreasing percentages of pregnant women with increasing maternal age (see Table 4.1). The 1996 national statistic for women not completing high school was 18.4 percent (*Statistical Abstract of the United States, 1997*). As can be seen, the study groups of women were slightly more likely to have completed a high school degree than the national average. Slightly more than one-third of the women were employed outside the home and another one-fourth of the sample were looking for work. More than two-fifths of the women reported household incomes of less than \$10,000 a year and almost one-fourth reported that very little or none of the household incomes were available to them. Two-fifths of the women were married and living with the fathers of their babies and just over one-fifth were single and living with the fathers of their babies. Slightly more than one-third of the women were single and not living with the fathers of their babies. Ninety percent of the

Table 4.1 Sample Characteristics (percentages)

Demographic Characteristics			
Race	%	Age	%
White	48.8	18-24	62.9
African American	48.1	25-30	25.2
Asian American	<u>03.1</u>	31 and over	<u>11.9</u>
	100.0		100.0
	(160)		(159)
Socioeconomic Characteristics			
Education Level	%	Household Income	%
Less than h.s	13.75	Under \$10,000	42.1
H.S. degree	44.4	10,001-20,000	29.0
Some college	36.6	21,001-35,000	21.4
College degree	<u>06.25</u>	Over \$35,000	<u>07.5</u>
	100.00		100.0
	(160)		(159)
Work Status		Available Income	
Working at least p/t	35.6	None	04.4
Homemaker	27.5	Very little	19.5
Looking for work	26.9	Enough	59.7
Student	<u>10.0</u>	A lot	<u>16.4</u>
	100.0		100.0
	(160)		(160)
Relationship Characteristics			
Marital Status	%	Partner is Baby's Father	%
M/ living with father	40.3	Yes	90.0
M/not living with father	03.8	No	<u>10.0</u>
S/living with father	21.3		100.0
S/not living with father	<u>34.6</u>		(160)
	100.0		
	(160)		
Attitude Characteristics			
Pregnancy wantedness-f	%	Pregnancy Wantedness-m	%
A lot	80.0	A lot	78.8
Somewhat	14.4	Somewhat	14.4
Very little	03.1	Very little	02.5
Not at all	<u>02.5</u>	Not at all	<u>04.4</u>
	100.0		100.0
	(160)		(160)

women reported that their current partners were the fathers of their babies. Four-fifths of the women reported wanting their pregnancies a lot, while the other one-fifth either were ambivalent or did not want their pregnancies. Similar percentages were reported by the subjects for their partners' wantedness of the pregnancies.

The median number of adults per household was two (range=1-5), whereas the median number of children per household was one (range=0-7). The median number of pregnancies per subject was two, and over four-fifths of the women had three or fewer pregnancies. Almost nine-tenths of the women stated they would be the primary caretakers after the children were born. Only three partners were reported to be unaware of the pregnancies. The mean number of weeks a woman was pregnant when her partner became aware of the pregnancy was six weeks, and four-fifths of the partners were aware of the pregnancies by ten weeks.

COMPARISON OF BATTERED AND NON-BATTERED WOMEN

Within the total study sample, 62 (38.75%) reported they had been battered during the past year, 16 of whom reported being battered during their current pregnancies. Ninety-eight (61.25%) women reported experiencing no battering during the past year. This section discusses the differences between these two groups of women. Table 4.2 shows battered women were slightly younger than non-battered women.

Non-battered women were more likely than battered women to have attended college and slightly more likely to be employed. Battered women were more likely than non-battered women to report having low household incomes (under \$10,000 a year) and not having access to enough income for their needs (see Table 4.3).

Table 4.2 Sociodemographics (percentages)

		Battered	Non-Battered	Total
Race				
	White	51.6	46.9	48.8
	Africa American	46.8	49.0	48.1
	Asian American	<u>01.6</u>	<u>04.1</u>	<u>03.1</u>
	Total	100.0	100.0	100.0
		(62)	(98)	(160)
Age				
	18-24	67.2	60.2	63.0
	25-30	24.6	25.5	25.0
	31-39	<u>08.2</u>	<u>14.3</u>	<u>12.0</u>
	Total	100.0	100.0	100.0
		(61)	(98)	(159)

Table 4.3 Economic Characteristics (percentages)

	Battered	Non-Battered	Total
Education			
Less than h.s.	11.3	15.3	13.8
H.S. degree	51.6	38.8	44.4
Some college	30.6	39.8	36.6
College degree	<u>06.5</u>	<u>06.1</u>	<u>06.2</u>
Total	100.0	100.0	100.0
	(62)	(98)	(160)
Work Status			
Working f/t	17.6	20.4	19.4
Working p/t	12.9	14.3	13.7
Homemaker	29.0	26.5	27.5
No work-looking	29.0	25.5	26.9
Student-no work	09.7	10.2	10.0
Student-work p/t	<u>01.6</u>	<u>03.1</u>	<u>02.5</u>
Total	100.0	100.0	100.0
	(62)	(98)	(160)
Household Income			
Under 10K	45.9	39.9	42.1
10-20K	24.6	31.6	28.9
20-35K	21.3	21.4	21.9
Over 35K	<u>08.2</u>	<u>07.1</u>	<u>07.6</u>
Total	100.0	100.0	100.0
	(61)	(98)	(160)
Available Income			
None	04.8	04.1	04.4
Very little	29.0	13.3	19.5
Enough	56.5	62.2	59.7
A lot	<u>09.7</u>	<u>20.4</u>	<u>16.4</u>
Total	100.0	100.0	100.0
	(62)	(98)	(160)

A greater percentage of battered women than non-battered were living with the fathers of their babies. Interestingly, a greater percentage of battered women than non-battered reported their current partners were not their babies' fathers (see Table 4.4). What cannot be determined from this study is whether a respondent was living with her current partner who was not her baby's father. This is important because it could place a woman at increased susceptibility to battering. Almost one-third of the battered women, but none of the non-battered reported they were forced sexually at least once during the past year.

Table 4.4 Relationship Characteristics (Percentages)

	Battered	Non Battered	Total
Marital/Living Status			
M/Living with baby's father	44.3	37.8	40.3
M/not living with baby's father	01.6	05.0	03.8
S/Living with baby's father	24.6	19.4	21.3
S/not living with baby's father	<u>29.5</u>	<u>37.8</u>	<u>34.6</u>
Total	100.0	100.0	100.0
	(61)	(98)	(159)
Partner is baby's father			
Yes	87.0	92.0	90.0
No	<u>13.0</u>	<u>08.0</u>	<u>10.0</u>
Total	100.0	100.0	100.0
	(62)	(98)	(160)
Forced Sex			
Yes	32.3	00.0	12.5
No	<u>67.7</u>	<u>100.0</u>	<u>87.5</u>
Total	100.0	100.0	100.0
	(62)	(98)	(160)

Battered women were more likely than non-battered to report feeling ambivalent about or not wanting their pregnancies. Battered women were also more likely than non-battered to report their partners either felt ambivalent or did not want the pregnancies (see Table 4.5).

SUMMARY

The percentages of women who reported being battered and those who reported not being battered were similar for the variables race, age, education, employment status, total household income, and marital or living status. However, battered women appeared to have less income available for their needs, to experience forced sex, and to report that both they and their partners had feelings of ambivalence about or did not want the pregnancies. The median number of adults per household in both groups of women was two. The median number of children per household in both groups was one, with the median number of pregnancies being two in both groups. Eleven (17.7%) battered women reported receiving medical treatment for an injury, but only two received medical treatments for an injury during the pregnancy. The primary battering site identified was the abdomen.

BIVARIATE ANALYSIS

The original hypotheses of interest contained two independent variables (pregnancy awareness and pregnancy wantedness), three dependent variables (battered, level of injury, and time of battering), two variables to be examined as both dependent and independent variables (abdominal battering and change in frequency), and four demographic variables (age, marital status, educational level, and race). In running summary statistics on the independent variable, pregnancy awareness, the researcher found 98 percent of the male partners were

Table 4.5 Attitude Characteristics (Percentages)

	Battered	Non-Battered	Total
Pregnancy Wantedness-Female			
A lot	71.0	87.0	80.0
Somewhat	21.0	09.0	14.4
A little	04.8	02.0	03.1
Not at all	<u>03.2</u>	<u>02.0</u>	<u>02.5</u>
Total	100.0 (62)	100.0 (98)	100.0 (160)
Pregnancy Wantedness-Male			
A lot	72.7	81.6	78.1
Somewhat	17.7	13.3	15.0
A little	03.2	03.1	03.1
Not at all	<u>06.4</u>	<u>02.0</u>	<u>03.8</u>
Total	100.0 (62)	100.0 (98)	100.0 (160)

aware of the pregnancies. Consequently, not enough variability existed to test it as a predictor variable for the initial onset of battering during pregnancy as was intended in Hypothesis I. This was also the case in Hypothesis III, where pregnancy awareness was hypothesized to be a predictor for an increase in the frequency of battering and in Hypothesis V where the variable was hypothesized to be a predictor for a level of injury requiring medical treatment. The unanticipated finding that only 7 of the 16 women who were battered during pregnancy were battered by their partners contributed to the difficulty in using pregnancy awareness as a predictor of partner battering. Several previous studies had suggested partners' awareness of the pregnancy might be a predictor variable for the onset of battering during the pregnancy.

This researcher found awareness of the pregnancy was not a viable predictor variable for either the onset or the continuation of battering.

Hypothesis II explored the relationship between the partner's wantedness of the pregnancy and the initial onset of battering during pregnancy. Of the 62 women who reported battering during the past year, 3 (4.8%) reported the battering began during their pregnancies and only one of these women reported the batterer was her partner. Therefore, not enough variability existed to test this hypothesis. In Hypothesis IV the relationship between the male partner's wantedness of pregnancy and an increase in the frequency of battering was explored. The use of the variable, change of frequency was not viable since it was found that many non-battered women chose to answer the question by marking no change in the battering.

Hypothesis VI was also not testable. This hypothesis explored the relationship between the degree of wantedness of the pregnancy by the partner and an injury due to battering during pregnancy requiring medical treatment. The researcher found of the 16 women who reported battering during their pregnancies, only 2 (12.5 %) reported receiving medical treatment for injuries due to battering. Both women reported battering only by someone other than their partners. No subject reported that during the pregnancy her fetus was injured. Nine women (14.5%) reported receiving medical treatment for injuries resulting from battering prior to the current pregnancies.

Hypothesis VII, concerning the relationship between the male partner's wantedness of pregnancy and abdominal battering (yes or no), was also not testable. Five women (8.1%) reported abdominal battering, four of whom reported the battering was by someone other than their partners. Of the battering sites identified by the women who experienced battering

during their pregnancies, the abdomen was still the most commonly identified site of battering. Finally, Hypothesis VIII, which explored whether an increase in the frequency of battering and abdominal battering resulted in an injury level requiring medical treatment, was not testable for the reasons stated above.

MULTIVARIATE ANALYSIS

Although problems existed with the hypotheses of interest, the data did suggest significant differences might exist between the women who were battered and those who were not and between women who were battered only by their partners and those battered only by someone other than their partners. A logistic regression analysis was completed to explore the differences between the group of women who were battered and the group of women who were not battered.

One hundred and forty-three cases are included in this analysis. A total of 17 cases were excluded from the analysis, 14 of which were excluded due to missing values on variables. When Cook's Distance values were computed, three cases were found to be influential observations that unduly affected the predicted probability of battering based on the model. The researcher examined these cases and found them to be different enough to warrant excluding them from the analysis.

Logistic regression is used to derive a prediction equation for the probability of an event occurring given one or more explanatory or predictor variables. In this study, the outcome event is the occurrence of battering. The prediction equation is expressed as a logistic function which includes a constant expression, e , raised to the power BETA. BETA is expressed in terms of the explanatory variables and their weights or parameters. A list of

variables chosen by the researcher for the model and their coding schemes are included in Table 4.6. Study variables include total household income, pregnancy wantedness-female, total income available to the subject, living with the father of the baby, partner forced sex, other forced sex, and whether the current partner is the baby's father. The coding for available income was reversed from the original questionnaire so that both household income and available income are ranked the same (low to high).

Table 4.7 shows the estimated coefficients (under column heading B) and related statistics from the logistic regression model which predicts battering from a constant and the predictor variables. A chi square value of 33.615 (df=14) for the overall model was significant at $p=0.0023$. The Wald statistic is a test of the null hypothesis that $BETA=0$. An explanatory variable with a logistic regression coefficient (B) significantly different from zero is a good predictor of the occurrence of an event. In this study, only the coefficients for living with the baby's father and partner forced sex were significant at 0.05.

The R statistic is used to look at the partial correlation between the outcome, or dependent, variable and an explanatory, or independent, variable given all of the other explanatory variables in the model. The R can range from -1 to +1. A positive value indicates that as the explanatory variable increases in value (for example, from 0 to 1) so does the likelihood of the event occurring. A negative value indicates the opposite. In this study, the R of .1952 for living with the baby's father indicates that as the value goes from 0 (subject does not live with the father of her baby) to 1 (the subject does live with the baby's father) the likelihood of the battering increases. For the variable, partner forced sex, the R of .1525 indicates that as the value of partner forced sex goes from 0 (partner did not force sex) to 1

Table 4.6 Variables and Parameters

	Value	(1)	Coding (2)	(3)	(4)
Total Household Income					
below 10000	1	1.000	.000	.000	.000
10000-20000	2	.000	1.000	.000	.000
20001-35000	3	.000	.000	1.000	.000
35001-50000	4	.000	.000	.000	1.000
over 50000	5	.000	.000	.000	.000
Pregnancy Wantedness-Female					
A lot	1.00	1.000	.000	.000	
Somewhat	2.00	.000	1.000	.000	
Very Little	3.00	.000	.000	1.000	
Not at all	4.00	.000	.000	.000	
Available Income					
No income	1.00	1.000	.000	.000	
Very little income	2.00	.000	1.000	.000	
Enough	3.00	.000	.000	1.000	
A lot	4.00	.000	.000	.000	
Living With the Father of the Baby					
No	.00	.000			
Yes	1.00	1.000			
Partner Forced Sex					
No	.00	.000			
Yes	1.00	1.000			
Other Forced Sex					
No	.00	.000			
Yes	1.00	1.000			
Current Partner is Baby's Father					
No	.00	.000			
Yes	1.00	1.000			

Table 4.7 Variables In The Equation

Variable	B	S.E	Wald	df	Sig	R	Exp(B)
total household income			2.490	4	.6463	.0000	
Below 10k	-.5131	1.2033	.1818	1	.6698	.0000	.5987
10-20 k	-1.0129	1.1707	.7486	1	.3869	.0000	.3631
20-35 k	-1.3149	1.2034	1.1938	1	.2746	.0000	.2685
Over 35 k	-1.3217	1.4246	.8607	1	.3535	.0000	.2667
living with father	1.7990	.6118	8.6477	1	.0033	.1952	6.0434
available income			2.1209	3	.5477	.0000	
None	1.5158	1.0566	2.0583	1	.1514	.0183	4.5531
Very little	.5860	.7945	.5441	1	.4607	.0000	1.7969
Enough	.3315	.5908	.3148	1	.5747	.0000	1.3930
partner is baby's father	-.1270	1.0774	.0139	1	.9061	.0000	.8807
partner forced sex	2.9245	1.1885	6.0545	1	.0139	.1525	18.6245
pregnancy wanted-f			2.6568	3	.4476	.0000	
A lot	-2.4269	1.7735	1.8726	1	.1712	.0000	.0883
Somewhat	-1.7932	1.7551	1.0438	1	.3060	.0000	.1664
A little	5.6334	19.0953	.0870	1	.7680	.0000	279.6189
other forced sex	.8557	1.0052	.7247	1	.3946	.0000	2.3530
CONSTANT	.7175	1.9067	.1416	1	.7067		

(partner did force sex) the likelihood of being battered increases.

Interpreting the Regression Coefficients

The logistic regression coefficients are best interpreted and understood in terms of the odds of an event occurring. The odds of an event occurring is the ratio of the probability it will occur to the probability it will not. Thus, the logistic coefficient can be interpreted as the change in the log odds associated with a one-unit increase in the predictor variable. The logistic equation may also be written in terms of odds rather than log odds. That is, e raised to the power B is the factor by which the odds change when the explanatory variable increases by one unit. If B is positive, this factor will be greater than 1, which means the odds

of an event occurring have increased. In Table 4.7, the column labeled Exp(B) lists the factors by which the ODDS of battering occurring change for each explanatory variable. This is the ODDS RATIO. In this study, for the variable, living with the baby's father, the ODDS of battering occurring increases by the Exp(B) factor 6.0434 when the value of living with the baby's father increases from 0 (not living with father of baby) to 1 (living with the baby's father). With regard to partner forced sex, the ODDS of battering occurring increases by the Exp(B) factor of 18.6245 when the value of partner forced sex increases from 0 (no partner forced sex) to 1 (partner forced sex). In other words the ODDS of battering occurring increase when the subject is living with the father of her baby and when she experiences forced sex from her baby's father.

GOODNESS OF FIT

The fit of a model can be assessed in several ways. One way is a classification table which compares predictions to observed outcomes. Table 4.8 is a comparison of predicted and observed group memberships for this study when cases with a predicted probability of .50 or greater are classified as battered. Over 93 percent of the non-battered women were correctly classified as non-battered and slightly under 40 percent of the battered women were correctly classified as battered. The off-diagonal entries tell how many women were classified incorrectly. A total of 35 women were misclassified, 29 battered and six non-battered. In Table 4.8 it can be seen that, while the overall model is good for classifying the subjects and is very good for classifying non-battered women, only a little under two-fifths of the battered women can be classified correctly. To correctly classify women who are battered, additional variables must be identified which could improve the prediction of a woman being battered.

Table 4.8 Classification Table for Loggroup(Battered)
the cut value is .50.

the cut value is .50.

		Predicted				Percent Correct	
		Not battered	Battered				
		n	I	b			
Observed		+-----+					
Not battered	n	I	89	I	6	I	93.68%
		+-----+					
Battered	b	I	29	I	19	I	39.58%
		+-----+					
Overall							75.52%

When examining the percentage classified correctly, the possibility exists of artificially inflating agreement due to chance. A Kappa statistic was run to assess the level of agreement controlling for chance. Outcome statistics for Kappa which crossed Loggroup levels with levels for the predicted group from the above model can be found in Table 4.9. In this study, Kappa is an agreement statistic for a 2 x 2 table in which the same levels occur in both dimensions. Kappa is distributed as a chi square statistic and the maximum value for Kappa is one, which means perfect agreement. The stronger the agreement, the higher the Kappa value. Negative values can occur when the agreement is weaker than what would be expected by chance. The value of .377 for Kappa means the agreement between the actual classification and the one produced by the analysis is a 37.7 percent greater agreement than would be expected by chance. The significance level of $p=.000$ means the exact p-value lies somewhere within the .00001 and .0001 interval.

Table 4.9 Kappa-Loggroup Levels * Predicted Group (Cross-tabulation)

			<u>Predicted Group from Model</u>		Total
			Not Battered	Battered	
Loggroup	Not Battered	Count	89	6	95
		Exp Count	78.4	16.6	95.0
	Battered	Count	29	19	48
		Exp. Count	39.6	8.4	48.0
	Total	Count	118	25	143
		Exp. Count	118.0	25.0	143.0
Symmetric Measures					
			Value	Asymp. Std. Error	App. T*
Measure of Agreement	Kappa		.377	.080	4.946
N of valid cases			143		.000
* Using the asymptotic standard error assuming the null hypothesis.					

The Hosmer and Lemeshow test for goodness of fit is a test of the model calibration of how closely the observed and predicted probabilities match. In this test the cases are divided into ten approximately equal groups based on the estimated probability of the event occurring. The test shows how the observed and expected number of events and nonevents compare. The chi-square test assesses the difference between these events. An obtained chi square of 9.8364(df= 8) was non-significant for rejection of the null hypothesis at the .05 level of significance. Therefore, there appears to be no difference between the observed and predicted values. Thus, the model appears to fit the data fairly well.

CHAPTER V

RESULTS, PART 2

BATTERED WOMEN

As previously noted, 62 women (38.75%) reported being battered during the past year. This chapter briefly reviews the demographic characteristics of these women and examines differences among them based on whether they were battered only by partners, only by someone other than partners, or both. A new variable, identity of the batterer, was created to explore these differences.

CHARACTERISTICS OF BATTERED WOMEN

Of the 62 women who reported battering during the past year, almost three fourths (74.2%) reported only pre-pregnancy battering; 4.8 percent reported battering only during pregnancy; and more than one-fifth (21%) reported continuous battering. An important, but unanticipated, finding of this study was that almost one-half (46.8%) of the 62 battered women were battered only by someone other than their partners; almost one-third (32.2%) were battered only by their partners; and more than one-fifth (21%) were battered by both their partner and someone else.

As discussed in Chapter 4, over one-half the battered women were white and more than two-thirds of the battered women were under the age of 25. More than 90 percent of the battered women were high school graduates, yet over two-thirds of the battered women were not working outside the home. Almost one-half the battered women had total household incomes of less than \$10,000 a year and one-third of the women reported having very little or no income available for their needs. More than two-fifths of the battered women were

married and living with their babies' fathers, almost one-fourth of the battered women were single and living with the fathers of their babies; and 30 percent of the battered women were single and not living with their babies' fathers. One battered woman was married and not living with the father of her baby. Thirteen percent of the battered women reported their partners were not their babies' fathers and almost one-third of the battered women reported forced sex. Almost 30 of the battered women reported feelings of ambivalence about or did not want their pregnancies and over one-fourth of the battered women reported their partners felt ambivalent about or did not want the pregnancies.

DIFFERENCES BY IDENTITY OF THE BATTERER

This section examines the demographic characteristics of battered women by whom their batterers are partners, others, or both partners and someone else. Race was not a significant factor for differentiating women battered by partners, someone other than partners, or both. A greater percentage of women battered only by someone other than their partners and those battered by both were 24 years of age or younger (see Table 5.1).

A greater percentage of women battered only by someone other than their partners than women battered only by their partners or women battered by both had attained at least a high school degree and were working outside the home. Women battered only by their partners and those battered by both appeared to be more likely than women battered only by someone other than their partners to report household incomes of less than \$10,000 a year. One-fourth of the women battered only by their partners and over one-fourth of those battered only by someone other than their partners reported having very little or no income available to them for their needs. Over three-fifths of the women battered by both their partners and someone

Table 5.1 Sociodemographics by Identity of Batterer (percentages)

	Partner	Other	Both	Total
Race				
White	45.0	55.2	54.0	51.6
African Amer	50.0	44.8	46.0	46.8
Asian Amer	<u>05.0</u>	<u>00.0</u>	<u>00.0</u>	<u>01.6</u>
Total %	100.0	100.0	100.0	100.0
	(20)	(29)	(13)	(62)
Age				
18-24	57.9	72.4	69.2	67.2
25-3	<u>42.1</u>	<u>27.6</u>	<u>30.8</u>	<u>32.8</u>
Total %	100.0	100.0	100.0	100.0
	(19)	(29)	(13)	(61)

else reported having very little or no income available for their needs (see Table 5. 2). The number of women found in the category of battered by both, however, is small and the findings may not hold up in larger samples.

Women battered only by someone other than their partners were more likely than those battered only by their partners to be married and living with their babies' fathers. Women battered only by their partners were more likely than women battered only by someone other than their partners to report their current partners were their babies' fathers and more likely to report experiencing forced sex by their partners. Over one-half the women battered by both their partners and someone else were not living with the fathers of their babies and were more likely to report their current partners were not their babies' fathers.

Table 5.2 Economic Characteristics by Identity of Batterer (%)

	Partner	Other	Both	Total
Education				
Less than h.s.	15.0	03.4	15.4	09.7
H. S. degree or greater	<u>85.0</u>	<u>96.6</u>	<u>84.6</u>	<u>90.3</u>
Total	100.0	100.0	100.0	100.0
	(20)	(29)	(13)	(62)
Employment				
Not working	70.0	55.2	84.6	66.0
Working	<u>30.0</u>	<u>44.8</u>	<u>15.4</u>	<u>34.0</u>
Total	100.0	100.0	100.0	100.0
	(20)	(29)	(13)	(62)
Household Income				
Less than \$10,000/yr.	47.0	41.4	53.8	46.0
More than \$10,001/yr.	<u>53.0</u>	<u>58.6</u>	<u>46.2</u>	<u>54.0</u>
Total	100.0	100.0	100.0	100.0
	(19)	(29)	(13)	(62)
Available Income				
Very little \$ for needs	25.0	27.6	61.0	34.0
Enough \$ for needs	<u>75.0</u>	<u>72.4</u>	<u>38.5</u>	<u>66.0</u>
Total	100.0	100.0	100.0	100.0
	(20)	(29)	(13)	(62)

This suggests the babies' biological fathers may have been the "other" batterers. Several women throughout the survey did volunteer that the "other" batterers were either ex-husbands or ex-boyfriends, but they did not state if the "others" were the babies' fathers. Since the researcher did not expect to find so many women battered only by someone other than partners, the question was not asked and is an unknown. As previously noted, the actual numbers of women battered, by the identity of their batterers, are small and may not hold up in other studies. It does, however, suggest this variable requires further study.

Forced sex was examined separately from physical battering. It was found that women battered only by their partners were more likely than women battered only by someone else or women battered by both to experience forced sex (see Table 5.3). A chi square statistic of 9.30 ($df=1$) which examined the relationship between forced sex and identity of the batterer was significant at $p=0.05$.

Women who were battered only by their partners were less likely than women battered only by someone other than their partners to report they were ambivalent about or did not want their current pregnancies (see Table 5.4). Women battered by both their partners and someone other than their partners were most likely to report having feelings of ambivalence about or not wanting the pregnancies. However, women battered only by their partners were more likely than women battered only by someone else or women battered by both to report their partners were ambivalent about or did not want the pregnancies.

Table 5.3 Relationship Characteristics by Identity of Batterer (%)

	Partner	Other	Both	Total
Marital Status				
M/living with father	42.1	48.3	38.5	44.3
M/not living with father	00.0	03.4	00.0	01.6
S/living with father	26.3	34.5	07.6	24.6
S/not living with father	<u>31.6</u>	<u>13.8</u>	<u>53.9</u>	<u>29.5</u>
Total	100.0	100.0	100.0	100.0
	(19)	(29)	(13)	(61)
Partner is Baby's Father				
Yes	95.0	89.7	69.2	87.0
No	<u>05.0</u>	<u>10.3</u>	<u>30.8</u>	<u>13.0</u>
Total	100.0	100.0	100.0	100.0
	(20)	(29)	(13)	(62)
Forced Sex				
Yes	60.0	17.2	21.3	32.3
No	<u>40.0</u>	<u>82.8</u>	<u>76.9</u>	<u>67.7</u>
Total	100.0	100.0	100.0	100.0
	(20)	(29)	(13)	(62)

Table 5.4 Attitude Characteristics by Identity of Batterer (%)

	Partner	Other	Both	Total
Pregnancy Wantedness-F				
A lot	85.0	72.4	53.9	72.7
Somewhat	10.0	17.2	30.9	17.7
A little	00.0	03.4	07.6	03.2
Not at all	<u>05.0</u>	<u>07.0</u>	<u>07.6</u>	<u>06.4</u>
Total	100.0 (20)	100.0 (29)	100.0 (13)	100.0 (62)
Pregnancy Wantedness-M				
A lot	65.0	76.0	69.0	71.0
Somewhat	20.0	17.2	31.0	21.0
A little	10.0	03.4	00.0	04.8
Not at all	<u>05.0</u>	<u>03.4</u>	<u>00.0</u>	<u>03.2</u>
Total	100.0 (20)	100.0 (29)	100.0 (13)	100.0 (62)

As shown in Table 5.5, women battered only by their partners were more likely than women battered only by someone other than their partners to experience continuous battering (battering that began before and continued into the pregnancy) and women battered by both their partners and someone other than their partners were most likely to experience continuous battering.

SUMMARY

As can be seen, no differences existed among the battered women by identity of the batterers on the variables of race, household income, available income, and timing of battering. On the other hand, women battered only by someone other than their partners were

Table 5.5 Time of Battering by Identity of the Batterer (Percentages)

	Partner	Other	Both	Total
Pre pregnancy only	75.0	79.3	61.5	74.2
During pregnancy only	05.0	06.9	00.0	04.8
Continuous	<u>20.0</u>	<u>13.8</u>	<u>38.5</u>	<u>21.0</u>
Total	100.0	100.0	100.0	100.0
	(20)	(29)	(13)	(62)

more likely than women battered only by their partners to be younger, have more education, be working outside the home, and be living with the fathers of their babies. Women battered only by their partners were more likely than women battered only by someone else to report their current partners were their babies' fathers, their partners forced them sexually, they wanted their pregnancies a lot and to report their partners were ambivalent about or did not want the pregnancies. Women battered by both their partners and someone else were more likely than those battered only by partners or only by someone else to report that they did not work outside the home, did not have enough income for their needs, their current partners were not their babies' fathers, and they felt ambivalent about or did not want their pregnancies. Only two women received medical treatment for injuries during their pregnancies, neither of whom reported they were battered by their partners.

MULTIVARIATE ANALYSIS

Discriminant analysis is a statistical technique that uses a linear combination of independent variables that best serve to classify cases into two or more mutually exclusive groups (Norusis, 1994). In this study, discriminant analysis was completed to determine the

differences between women battered only by their partners and those battered only by someone other than their partners. Two assumptions must be met in order for the linear combinations or discriminant functions to be optimal. These assumptions are that 1) each group must be a sample from a multivariate normal population and 2) the covariance matrices must be equal (Stevens, 1996).

A discussion of these two assumptions relative to this study will facilitate a clearer understanding of the findings of this analysis. In order for multivariate normality to hold, each of the individual variables must be normally distributed. In addition, any linear combination of variables must also be normally distributed, as well as all subsets of the set of variables. That all subsets must be normally distributed means that all pairs of variables must be bivariate normal (Stevens, 1986). In this study categorical variables exist which will not have a univariate normal distribution. As a result the assumption that the group must be a sample from a multivariate normal population is violated and the results must be interpreted with caution. However, Stevens (1986) notes that with small or medium-sized samples and ten or fewer variables, violation of the discriminant analysis assumption of multivariate normal population does not cause a problem for type I errors. The assumption of equal covariance matrices was also violated by the data adding to the need for caution in interpreting the results.

The three groups in the analysis were coded as follows: women not battered during the year were coded 0; women battered only by their partners were coded 1; and those battered only by someone other than their partners were coded 2. Of the 160 surveyed subjects, 141 were included in the analysis. Thirteen women who were battered by both their

partners and someone else were excluded to maintain mutually exclusive groups; three were excluded from the analysis because of missing discriminating variables; and three cases were removed because they had influential observations that affected the predicted values. These three cases were also excluded from the logistic regression analysis. Seven variables were included in the analysis and are listed below. The sample-to-variable ratio of 20 to 1 allows for stability in the standardized coefficients and correlations (Stevens, 1986) and provides a level of confidence in the reliability of the results. That is, assuming random sampling there is confidence the results from this sample would be similar to the results from another sample drawn from the same population. However, since the data in this study violated the assumptions of discriminate analysis, the results must be interpreted with caution due to the possibility of finding spurious results.

As previously noted, theory suggests battered women tend to be single, to have less available income, to be younger, to have less than a high school degree, and may be ambivalent about or not want their pregnancies. In this study the variables of available income, pregnancy wantedness-female, pregnancy wantedness-male, and forced sex appear to differentiate between women battered only by their partners, women battered only by someone other than their partners, and non-battered women.

The following variables were chosen for the discriminant analysis: current partner is the father of the baby, pregnancy wantedness-female, pregnancy wantedness-male, marital status (married or single), partner forced sex, other forced sex, and total available income. Descriptive statistics for the variables used in the analysis are found in Table 5.6.

Table 5.6 Group Statistics

Newgroup	Percent of Sample	Variable	Mean	Standard Deviation
.00 Not battered	66.7	Partner is baby's father	.93	.26
		Pregnancy wanted-f	1.16	.44
		Pregnancy wanted-m	.18	.38
		Marital status	.44	.50
		Other forced sex	2.083E-02	.14
		Partner forced sex	1.042E-02	.10
		Total available inc	2.05	.72
1.00 Battered by partner	12.8	Partner is baby's father	1.00	.000
		Pregnancy wanted-f	1.59	.94
		Pregnancy want-m	5.882E-02	.24
		Marital status	.41	.51
		Other forced sex	.00	.000
		Partner forced sex	.35	.49
		Total available inc	1.94	.56
2.00 Battered by other	20.5	Partner is baby's father	.90	.30
		Pregnancy wanted-f	1.29	.69
		Pregnancy wanted-m	.29	.46
		Marital status	.48	.51
		Other forced sex	.13	.34
		Partner forced sex	6.452E-02	.25
		Total available inc	2.35	.80
Total	100 N=141	Partner is baby's father	.93	.26
		Pregnancy wanted-f	1.24	.59
		Pregnancy wanted-m	.19	.39
		Marital status	.44	.50
		Other forced sex	4.167E-02	.20
		Partner forced sex	6.250E-02	.24
		Total available inc	2.10	.73

OUTCOME STATISTICS

The seven independent variables could be reduced to two discriminant functions (see Table 5.7). The outcome statistics begin with the Eigenvalues, which are the ratios of between groups sums of squares to within groups sums of squares. Large Eigenvalues are associated with good discriminant functions. A good discriminant function is one which has much between group to within group variability. As Table 5.7 shows, Function 1 explains 75.9 percent of the variance and Function 2 explains 24.1 percent of the variance.

A Wilks' Lambda of .592 for Function 1 (chi square=70.744; df=14) was significant at $p<.000$ and for Function 2, a Lambda=.870, (chi square=18.764; df=6) was significant at $p=.005$. The Wilks' Lambda is a test of the null hypothesis that the study sample means are equal. A value of 1 or large values for Lambda mean that all group means are equal, and a value of 0 or small values for Lambda mean that the group means are different. Lambda is the ratio of within sums of squares to total sums of squares and gives one the proportion of the total variances in the discriminant scores not explained by differences among the groups.

The standardized discriminant function coefficients are used when the variables have been standardized to a mean of 0 and a standard deviation of 1. Variables with large coefficients are thought to contribute more to the overall discriminant function. The Structure Matrix gives the correlations between the values of the function and the values of the variables. Table 5.7 shows that partner forced sex has the highest correlation with Discriminant Function 1 and pregnancy wantedness-female has the second highest correlation. When the Standardized Coefficients and the Discriminant Function-Variable Correlation are considered together, it can be said that Discriminant Function I is characterized by a partner-forced sex-pregnancy

Table 5.7 Outcome Statistics

Eigenvalues				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.470	75.9	75.9	.565
2	.149	24.1	100.0	.360

Wilks' Lambda				
Test of function(s)	Wilks' Lambda	Chi Square	df	Sig.
1 through 2	.592	70.744	14	.000
2	.870	18.764	6	.005

Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
Partner is baby's father	.253	.000
Pregnancy wanted-f	.492	.127
Pregnancy wanted-m	-.190	.265
Marital status	.017	.436
Other forced sex	-.213	.715
Partner forced sex	.842	.147
Total available income	-.149	.579

Structure Matrix

	Function	
	1	2
Partner forced sex	.802	.264
Pregnancy wanted-f	.465	.139
Partner is baby's father	.132	-.026
Other forced sex	-.085	.727
Total available income	-.105	.484
Pregnancy wanted-m	-.152	.316
Marital status	-.034	.137

Pooled within groups correlations between discriminating variables and standardized canonical discriminant functions.

wantedness-female continuum. In other words, battered women who score high on forced sex by their partners appear to want the pregnancy a lot. Discriminant Function 2 is characterized by an other forced sex-available income for subject continuum. Thus, women who scored high on other forced sex had more income available to them.

The functions at the group Centroids show that for Function 1, Group 0 (-.273) and Group 2 (-.179) are similar while Group 1 (1.828) is significantly different. In other words, the variable, partner forced sex, is significant for differentiating between women battered by their partners, battered by someone other than their partners, and non-battered women. For Function 2, Group 0 (-.222) and Group 1 (-5.773E-02) are similar while Group 2 (.728) is different, which means the variable, other forced sex, is significant for differentiating between women battered by someone other than their partners, women battered by their partners, and non-battered women. With regard to the variable, pregnancy wantedness-female, a subject's attitude about wanting the pregnancy is in a direction different from what one would expect. That is, even though women were battered, they wanted the pregnancy a lot. This may be one of the reasons that battered women were misclassified as non-battered.

In this analysis 72.3 percent of the original grouped cases and 65.2 percent of the cross-validated grouped cases were classified correctly. As Table 5.8 shows, this model is good for classifying non-battered women correctly, but is only able to correctly classify slightly over two-fifths of the women battered by partners and just over two-fifths of the women battered only by someone other than their partners. Two additional models were run, the first of which replaced the variable, marital status, with the variable, living with the father of the baby. The second model included both marital status and living with the father of the

Table 5.8 Classification Results

			Predicted Group Membership			
Newgroup			.00	1.00	2.00	TOTAL
Original	Count	.00	81	1	12	94
		1.00	8	8	1	17
		2.00	16	1	13	30
	%	.00	86.2	1.1	12.8	100.0
		1.00	47.1	47.1	5.9	100.0
		2.00	53.3	3.3	43.3	100.0
Cross-validated	Count	.00	76	3	15	94
		1.00	8	7	2	17
		2.00	18	3	9	30
	%	.00	80.9	3.2	16.0	100.0
		1.00	47.1	41.2	11.8	100.0
		2.00	60.0	10.0	30.0	100.0

baby in the analysis. The first model using the variable, living with the father of the baby, instead of the variable, marital status, was better able to classify non-battered women; however, classification of the battered women was considerably poorer. In the second model, using both marital status and living with the father of the baby, the model was better able to predict those women who were battered only by their partners, but less able to identify those battered only by someone other than their partners and less able to predict non-battered women. For these reasons the researcher chose the model described above.

A final note in this chapter regards the violation of the assumptions of discriminant analysis due in part to the use of discrete dichotomous variables. The researcher completed

the discriminant analysis initially, then chose to also complete the logistic regression analysis discussed in Chapter 4. Logistic regression is an alternative classification procedure for classifying subjects into groups.

CHAPTER VI

DISCUSSION AND IMPLICATIONS

LIMITATIONS OF THE STUDY

A major sampling limitation of research on battered women is that only women who are willing and/or able to participate can be counted. Research has found that women who are battered do not always report or are afraid to report the violence in their lives, even when asked. One hundred and nine women either refused to participate in the study, left without speaking to the researcher, did not speak English, or did not keep their prenatal visits. The amount of violence experienced by this group of women is unknown. A second limitation of the sampling process for this study was that neither clinic kept an accurate listing of all third-trimester patients as the clinic staff had originally indicated to the researcher. One reason this occurred was their lack of timeliness in entering new prenatal patients into the system. When the researcher identified this on the first day of the interviews, chart reviews were completed before each clinic opened and during the clinic. This helped to identify third-trimester patients who were scheduled for clinic or who showed up that day but were not listed on any of the printouts as prenatal patients.

A third limitation was that there were high "no show" rates and "drop-in" rates in one clinic site. For instance, it was common to attend a clinic day expecting to interview 10-12 patients only to find 4-5 who kept their appointments. Also common, was that sometimes the researcher did not attend the second clinic on a day when few prenatal patients had been scheduled only to learn later many patients had dropped-in. The research schedule originally alternated clinic sites and survey days. However, it became necessary to adjust the survey schedule by splitting the days and surveying at one site in the mornings and evenings and at

the second site in the afternoons. This change was not as successful as the researcher had hoped in catching drop-in subjects.

A final unanticipated sampling limitation of this study was the effect of the study on the clinic staff and professionals. During the study, the researcher learned that three clinic professionals were experiencing violence from their partners. These professionals were initially resistant to the survey. The resistance became clear when they sent subjects home before speaking to the researcher. While the researcher had previously explained the study to the clinic staff in a series of meetings, it became necessary to develop a written explanation of the project which was given to all staff to increase their understanding of the confidential nature and importance of the study. This effort was successful in that no future subjects were sent home before seeing the researcher.

Survey Instrument Limitations

The researcher had planned to use the Hudson Partner Abuse Scale:Physical (PASPH) to obtain the level of severity of the violence experienced by the women from their partners. It was found, however, that this scale was not sensitive enough to identify the severity level of the violence subjects experienced during pregnancy. For instance, 14 women requested to speak to their doctors about the violence they were experiencing, yet the PASPH questionnaire identified only one subject as experiencing violence severe enough to be considered battered when using 30 as the clinical cut-off point. When the researcher lowered the clinical cut-off point to 15, only three subjects were identified as experiencing a level of severity high enough to be considered battered on the PASPH questionnaire. Therefore, this measurement tool was viable only as a determinant of which women had or had not

experienced any violence from their partners during the past year. Used in this manner, 28 women on the PASPH questionnaire identified themselves as having experienced violence from their partners during the past year, while 33 women on the study questionnaire identified themselves as having experienced battering from their partners during the past year. The 28 women who identified themselves on the PASPH questionnaire also identified themselves on the study questionnaire. Of the remaining five women, one woman reported the onset of battering during the pregnancy on the study questionnaire, but did not report battering on the Hudson questionnaire and four women identified themselves as experiencing violence during the past year only on the study questionnaire. The PASPH questionnaire also could not be used to differentiate those who were battered only before pregnancy from those women who were battered after the pregnancies began. Therefore, it was necessary to compare the raw data on both questionnaires to determine this information. A final problem with the PASPH questionnaire was that it asked only about partner violence. This was an unanticipated problem since the researcher had not expected to find so many women battered only by someone other than their partners. The 29 women in this study who were battered only by someone other than their partners did not complete PASPH questionnaire.

Design Limitations

A final limitation of this study was due to the design, which did not allow for the collecting of narrative data. Although the researcher told the subjects they were not to discuss their experiences, after completing the questionnaires many subjects wanted to talk about an experience of their own or of someone they knew. Most of the subjects expressed concern about violence toward pregnant women, stating they believed it was an important, but not a

well-known problem. One woman stated that she wished someone had asked her about violence when she was carrying her last child saying "Maybe then I wouldn't have lost my baby." This subject said her previous partner had hit her in the abdomen during her last pregnancy. The result was a miscarriage, but she stated that when the emergency room physician asked her if anyone had hit her, she denied experiencing battering. The researcher believes narrative information would have provided a depth of information not currently available to this study and recommends that future research include a narrative component.

Finally, it is important to note the findings from this study are unique to this clinic sample and may not generalize to the entire population of pregnant women. Also important, is that this was a sample from a clinic population of pregnant women and the number of subjects found in many categories was small. This was particularly true regarding the numbers of women battered during their pregnancies. Thus, the findings of this study may not hold up in larger samples of pregnant women. This chapter discusses implications for future theory, research, and practice.

IMPLICATIONS FOR THEORY

Currently no theoretical explanation exists for violence by males toward their pregnant partners. The percentages of women who reported battering in this study are similar to the percentages found in previous studies. The unanticipated finding in this study, that many women were battered during the year and during their pregnancies by someone other than their partners, suggests any theory about violence during pregnancy include not just violence by partners, but also violence by others. It is also important to future theory development that researchers explore why women who live with current partners also experience battering by

someone other than their partners. Identifying the relationship of the batterers to the pregnant women would be important. Further, a clear definition of the variable, pregnancy wantedness, differentiating the partner's wantedness from the woman's wantedness, is needed.

This study found that living with a partner should be a separate variable from marital status and both should be included in any theoretical explanation of battering. Future theory development must include an exploration of the relationship between marital status and battering and between living status and battering.

If researchers continue to suggest the partner's awareness of pregnancy be a factor in either the continuation or the onset of battering, future theory must include a better understanding of the role of the battering partner's awareness of the pregnancy in the continuation and onset of battering during pregnancy. This study did not find a relationship between simply knowing about the pregnancy and battering. It may be that when stress exists in the family relationship from one or several sources the additional stress of a pregnancy might lead to battering. This seems to suggest knowledge of the pregnancy alone does not contribute to battering, rather, it would be the increased stress of the pregnancy.

It is recommended that a better understanding is needed about the connection between physical battering of women and forced sex by partners and/or forced sex by someone other than partners. For instance, is forced sex another form of physical violence that should be included in the definition of physical violence, or is it a separate issue? Development of theory that speaks to this issue is essential based on the findings of this study.

Finally, theory development must begin to include the effect of violence on the woman

and her sense of self when involved in a violent relationship. Data to support this aspect of theory might be gathered through the narrative. This would produce additional information from the battered woman's perspective, which may improve our understanding of the violence experienced by the pregnant woman, leading to an improved theoretical base.

IMPLICATIONS FOR RESEARCH

More women sought medical treatment for the violence they experienced from someone other than their partners than from violence they experienced from partners. However, it is unknown whether the violence the women experienced from their partners was less severe than from someone else. Prior to the survey none of the subjects had told their doctors about the violence they were experiencing; however, during the study 14 women requested to speak to their doctors about the violence they were experiencing. This finding supports the necessity of asking about violence during each clinic visit. The finding also supports the importance of addressing the issue of violence toward women with professional and clinical staff both before and during the survey.

Future studies of women from general populations of pregnant women seen in both prenatal and family practice clinics would help to improve our understanding of how widespread violence is toward pregnant women. The populations of women served by these clinics are a cross-section of our society and not just women who self-identify as having been battered.

Improved questionnaires that specifically explore battering during pregnancies and battering of women overall are essential. The standardized questionnaire used in this study

was not sensitive enough to identify the severity of battering during pregnancy. While this questionnaire did identify 28 women as having been battered during the past year by their partners, it did not ask about those women battered by someone other than their partners. Further, in this study only three women fell above the suggested clinical cut-off points (30 or 15) for battering on this standardized questionnaire. In contrast, 16 women identified themselves on the study questionnaire as battered during pregnancy and 14 requested to speak to their doctors about the current violence. This finding suggests that continued research into and development of valid and reliable survey instruments that are sensitive to violence, the severity of the violence, and differentiate between partner battering and the battering of others is needed.

Future studies should include a narrative that allows women to tell their stories. This study found most of the women who participated did so because they believed violence toward women was a major problem.

A final implication for research is that in the survey setting certain staff may be experiencing violence in their lives. Developing a process to minimize any effect of this on the study would be an important consideration.

IMPLICATIONS FOR PRACTICE

The finding that a full 38.9 percent of the women surveyed in this study reported experiencing physical violence during the year and almost 26 percent of these women reported battering during their current pregnancies suggests the importance of continued research on this topic. These findings support the necessity of our practice interventions being

aimed toward early identification and support throughout pregnancy. Since non-pregnant women experience violence as well as pregnant women, it is essential that every social worker be aware of and ask their clients about violence they may be experiencing. Another implication for practice is that when asked about violence many women do admit to being battered and do want to discuss it with their doctors. It is recommended that every woman be asked at her initial prenatal visit if she is experiencing violence and at each subsequent visit since some women are battered for the first time during pregnancies. An outcome of this study was that in one clinic, the nurse practitioners implemented a screening tool for violence beginning with the woman's first prenatal visit.

Additional research is essential in all areas of violence and pregnancy. Collaborative research with other disciplines would bring new perspectives and the inclusion of perhaps different variables of interest which may help increase our understanding of violence, not only during pregnancy, but of violence toward women in general. Finally, it is imperative that in all of our practice settings we make it clear both in our behavior and in our words that violence toward women will no longer be tolerated.

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APPENDICES

Appendix A



PARTNER ABUSE SCALE: Physical (PASPH)

Name: _____ Today's Date: _____

This questionnaire is designed to measure the physical abuse you have experienced in your relationship with your partner. It is not a test, so there are no right or wrong answers. Answer each item as carefully and as accurately as you can by placing a number beside each one as follows:

- 1 = None of the time
- 2 = Very rarely
- 3 = A little of the time
- 4 = Some of the time
- 5 = A good part of the time
- 6 = Most of the time
- 7 = All of the time

1. _____ My partner physically forces me to have sex.
2. _____ My partner pushes and shoves me around violently.
3. _____ My partner hits and punches my arms and body.
4. _____ My partner threatens me with a weapon.
5. _____ My partner beats me so hard I must seek medical help.
6. _____ My partner slaps me around my face and head.
7. _____ My partner beats me when he or she drinks.
8. _____ My partner makes me afraid for my life.
9. _____ My partner physically throws me around the room.
10. _____ My partner hits and punches my face and head.
11. _____ My partner beats me in the face so badly that I am ashamed to be seen in public.
12. _____ My partner acts like he or she would like to kill me.
13. _____ My partner threatens to cut or stab me with a knife or other sharp object.
14. _____ My partner tries to choke or strangle me.
15. _____ My partner knocks me down and then kicks or stomps me.
16. _____ My partner twists my fingers, arms or legs.
17. _____ My partner throws dangerous objects at me.
18. _____ My partner bites or scratches me so badly that I bleed or have bruises.
19. _____ My partner violently pinches or twists my skin.
20. _____ My partner badly hurts me while we are having sex.
21. _____ My partner injures my breasts or genitals.
22. _____ My partner tries to suffocate me with pillows, towels, or other objects.
23. _____ My partner pokes or jabs me with pointed objects.
24. _____ My partner has broken one or more my bones.
25. _____ My partner kicks my face and head.



April 14, 1995

Ms. Helene Halvorson
6629 Bainbridge Dr.
Memphis, TN 38119

Dear Ms. Halvorson:

We are pleased that you have decided to use our scales in your research study. Our scales are copyrighted and cannot be copied, reproduced or altered in any manner. Upon purchase of the instrument you do not need permission to use the instrument in your research study.

Instruction on the use and the scoring of the instruments can be found in the *Walmyr Assessment Scales Scoring Manual*.

When you complete your dissertation research, your library will likely ask for permission to place one photocopy of the scales in your dissertation. Please accept this letter as permission to do that and give a copy of the letter to your library at the time you submit your dissertation to them.

If we can be of further assistance, please do not hesitate to contact us. Good luck with your dissertation project.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Myrna Hudson'.

Myrna Hudson
Executive Director

Enclosures

P.O. Box 24779 • Tempe, AZ 85285-4779 • (602) 897-1040 • FAX (602) 897-8168

Appendix B

QUESTIONNAIRE # _ _ _

IF YOU HAVE NOT BEEN PHYSICALLY HURT BY YOUR PARTNER OR SOMEONE ELSE SINCE YOU HAVE BECOME PREGNANT PLEASE DO NOT COMPLETE THE REST OF THE QUESTIONNAIRE

Thank you for your time and assistance with this project

MODIFIED ABUSE ASSESSMENT SCALE

We would like to understand more about your thinking about this pregnancy and about your experiences since you have become pregnant. Since you have been pregnant, where on your body have you have been hit, slapped, kicked, or otherwise physically injured by someone? Please make a mark on the body map below where on YOUR body you have been physically hurt and tell us how often it has happened.

How many times?

Head _____

Arms _____

Stomach _____

Back _____

Legs _____

QUESTIONS

35. Where on your body have you been hit the most since you have become pregnant?
(Please Circle) 1. head, 2. arms, 3. stomach, 4. back 5. legs
36. Have you been hit, slapped, punched, kicked, knifed, or otherwise injured
in your stomach since you have been pregnant? _____ 1. Yes 2. No
- 36a. If yes, by whom? (Please Circle) 1. Partner 2. Other
- 36b. If yes, did you receive medical treatment for yourself? _____ 1. Yes 2. No
37. Was your baby hurt when you were hit in the stomach? _____ 1. Yes 2. No
- 37a. If yes, did you receive medical treatment for your baby? _____ 1. Yes 2. No

Appendix C

STUDY QUESTIONNAIRE

QUESTIONNAIRE # _____

Please make a check for your answer to the following questions.

1. Marital Status: 1. __ Married, living with father of baby, 2 __ Married, not living with father of baby, 3. __ Single, living with father of baby, 4 __ Single, not living with father of baby.
2. Race: 1. __ White, 2. __ African American, 3. __ Asian America, 4. __ American Indian.
3. Education: 1. __ Less than High School, 2. __ H.S. Grad/GED, 3. __ Some College, 4. __ College graduate.
4. Total Household Income: 1. __ Below 10,000, 2. __ 10,001-20,000, 3. __ 20,001-35,000, 4. __ 35,001-50,000, 5. __ Over 50,000.
5. How much of the total household income do you have available to you each month? 1. __ A lot, 2. __ Enough for your needs, 3. __ Very little, 4. __ None.
6. Employment Status: 1. __ Working full time, 2 __ Working part-time, 3. __ Not working, but looking, 4. __ Homemaker, full-time, 5. __ Student, not working, 6. __ Student, working P/T.
7. How many people live in your home including yourself? 1. ____ Adults, 2. ____ Children
8. What is your date of Birth? _____
Month Day Year

PLEASE ANSWER THE FOLLOWING QUESTIONS

9. Including this pregnancy, how many times have you been pregnant? _____
10. Who will be caring for your baby after he/she is born? 1. ____ Self 2. ____ Other
11. Is your current partner the father of your baby? 1 __ Yes, 2. __ No, 3. __ Don't know
12. Which of the following statements is most true for you?
 - A. I want this pregnancy a lot. ____
 - B. I want this pregnancy somewhat. ____
 - C. I want this pregnancy a little. ____
 - D. I do not want this pregnancy. ____
13. Does your partner know that you are pregnant? 1. __ Yes, 2. __ No.
If No, go to question number 16
- 13a. If yes, who told him you were pregnant? 1. __ You, 2. __ Someone else.
14. How many weeks pregnant were you when your partner learned that you were pregnant? ____.
15. Which of the following statements is most true for the father of your baby?
 - A. He wants this pregnancy a lot. ____
 - B. He wants this pregnancy somewhat. ____
 - C. He wants this pregnancy a little. ____
 - D. He does not want this pregnancy. ____

QUESTIONNAIRE # _ _ _

16. Are there any important items which you still need to purchase before your baby is born? (Please list any items) _____
17. Before you were pregnant, did your current partner ever hit, slap, kick, or physically hurt you on purpose?-----1. Yes 2. No

If No, go to question Number 19

- 17a. If Yes, Total number of times hurt. _____
18. Before you were pregnant did you ever seek medical treatment for the injury?----1. Yes 2.No
19. Before you were pregnant, not counting your partner, did anyone else ever hit, slap, kick, or other wise physically hurt you?-----1. Yes 2.No

If No, go to question number 21

- 19a. If yes, total number of times hurt. _____
- 20 Before you were pregnant did you ever seek medical treatment for the injury? ----- 1.Yes 2.No
21. Since your partner learned that you are pregnant with this baby, has your partner ever hit, slapped, kicked, or otherwise physically hurt you on purpose?-----1. Yes 2.No

If No, go to question 25

- 21a. If yes, total number of times hurt. _____
22. Since your partner learned that you are pregnant, did you ever seek medical treatment for an injury from being hit, slapped, kicked, or otherwise physically hurt by your partner? -----1. Yes 2.No
23. Was your baby injured when your partner physically hurt you?-----1. Yes 2.No

If No, Go to Question 24

- 23a. If Yes, did you seek medical treatment for your baby? -----1. Yes 2.No
24. How many weeks pregnant were you when your partner first physically hurt you? _____

QUESTIONNAIRE # _ _ _

25. Since you have been pregnant with this baby, not counting your partner, has anyone else ever hit, slapped, kicked, or otherwise physically hurt you on purpose?-----1.Yes 2.No

If No, Go to Question 29

- 25a. If yes, total number of times hurt. _____
26. Since you have been pregnant did you ever seek medical treatment for an injury from being hit, slapped, kicked, or physically hurt by someone other than your partner? -1.Yes 2.No
27. Was your baby injured when someone else physically hurt you? -----1.Yes 2.No

If No, Go to Question 28

- 27a. If Yes, did you seek medical treatment for your baby? -----1.Yes 2.No
28. How many weeks pregnant were you when someone other than your partner first physically hurt you? _____
29. How has the physical battering changed since your partner learned that you are pregnant?
___1. My partner didn't hit me before he learned I was pregnant and he doesn't hit me now.
___2. My partner didn't hit me before he learned I was pregnant, but he does hit me now.
___3. My partner did hit me before he learned I was pregnant, but he doesn't hit me now.
___4. My partner did hit me before he learned I was pregnant and he still does hit me.
30. Since your partner learned that you are pregnant has the AMOUNT of hitting, slapping, kicking, or other physical hurt changed? -----1.Yes 2.No
- 30a. If yes, how has it changed? (Please Circle)-----1. Increased
2. Decreased
3. No Change
31. **WITHIN THE LAST YEAR**, did your current partner force you to have sexual activities? -----1.Yes 2.No

If No, go to question 32

- 31a. If yes, total number of times. _____
32. Did anyone else force you to have sexual activities? ----- 1.Yes 2.No
- 32a. If yes, Who? (list relationship, not the person's name) _____
- 32b. If yes, total number of times? _____
33. Are you afraid of your current partner? ----- 1.Yes 2.No
34. Are you afraid of anyone else you listed above in question number 32?----- 1.Yes 2.No
Please list anyone else of whom you are afraid.(List relationship, not name) _____

VITA

Helene K. Halvorson was born in Loma, North Dakota, on April 9, 1946. She attended the public school systems of Nelson County and Grand Forks County where she graduated from Grand Forks Central High School in May 1964. She entered the University of North Dakota, Grand Forks, North Dakota, during September 1964 where in January 1969 she received the Bachelor of Philosophy degree with a major in Social Work. After working for the State of Florida, Department of Human Services, Protective Services for Children for over two and one half years, she entered the Master's program in Social Work at Barry University in Miami Shores, Florida, during August 1974, receiving the Masters in Social Work degree in May 1976. For sixteen years, she worked with multiple client systems in the health and mental health fields, providing program and policy development, administration services, and direct practice with clients. In August 1992, she entered the University of Tennessee to pursue the Doctorate of Philosophy in Social Work. She taught in the M.S.W. program at the University of Arkansas at Little Rock for three years while continuing her doctoral research. The doctoral degree was awarded in May 1999.

She is currently teaching in the B.S.W. program at Philander Smith College in Little Rock, Arkansas, while also providing consultation services to the Arkansas Department of Human Services, Division of Child and Family Services.