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The Effects of Women's Health and Life Experiences on Surgical Intervention

Debra Jeanne Hastings

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THE EFFECTS OF WOMEN'S HEALTH AND LIFE EXPERIENCES
ON SURGICAL INTERVENTION

by

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THE EFFECTS OF WOMEN'S HEALTH AND LIFE EXPERIENCES ON SURGICAL INTERVENTION

Debra Jeanne Pilling Hastings, PhD

Duquesne University, 2006

Research suggests that violence against women is a significant public health problem that has reached catastrophic levels. Women who are abused use health care services at higher rates than those who are not abused and continue to experience health problems long after the original trauma. Few studies have examined the association between women's history of victimization and numbers and types of surgical interventions over the life course.

A triangulated study using quantitative and qualitative approaches was designed. The cross-sectional descriptive study was conducted through use of a survey of 156 women who were scheduled for elective surgery. The qualitative methodology, which included post operative interviews with eight women, described the perceived experiences of perioperative female clients who acknowledged intimate partner violence (IPV) in their current relationship with a partner.

The relationship between women's history of victimization and the numbers and types of surgical intervention they experienced was examined statistically. State (pre-operative) and trait anxiety were also studied. Findings revealed that women who had a history of victimization as a child and as an adult experienced a significantly higher number of surgeries than women who had survived child maltreatment only. The average number of major surgeries experienced by women who were survivors of both child maltreatment and IPV as an adult approached a significantly higher number of major surgeries than the average number of major surgeries

experienced by women with a history of child maltreatments only. State Trait Anxiety Inventory (STAI) trait scores of women who were victims of both IPV and child maltreatment were significantly higher than the average STAI trait scores for women who had never been abused.

Screening for victimization history is suggested in perioperative settings to facilitate appropriate intervention. Nurse education and training that support staff competence in the identification and assessment of victims in the clinical setting is recommended in order to provide optimum care that will enhance patient safety. The ultimate goal is to improve outcomes for all women who have histories of victimization.

Dissertation Advisor: [L. Kathleen Sekula, PhD, APRN - BC]

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I. INTRODUCTION

Violence against women by an intimate partner is a significant public health problem and is all too common in the United States (US) today (Bohn & Holz, 1996). Millions of women are victims of violence by a current or former partner at some point in their lives (National Advisory Council on Violence Against Women, 2001). In fact, intimate partner violence (IPV) has been described as an epidemic (Alpert, 1995; Bohn & Holz, 1996; Flitcraft, 1995; McAfee, 1999) and more recently it has reached “crisis” proportions (Guth & Pachter, 2000).

Intimate partner violence, domestic violence, and battering are used interchangeably. For the purposes of this study, “intimate partner violence” (IPV) will be used to refer to the concept being examined. Victims of IPV are at risk for developing many health problems (Bullock & Schornstein, 1998). IPV accounts for an estimated one-quarter to one-half of all women presenting for treatment in emergency rooms (U.S. Department of Justice, 1998). Women who have been battered or sexually assaulted are reported to utilize health care services at significantly higher rates than women who have not experienced abuse (Bergman & Brismar, 1991; Coker, Smith, Bethea, King, & McKeown, 2000; Koss, Koss, & Woodruff, 1991; McCauley et al., 1995). In fact, long after the occurrence of the original trauma, victims of IPV continue to experience health care problems (Campbell, 2002).

Nearly one-third of women injured during their most recent physical assault sought treatment from a health care provider (Tjaden & Thoennes, 2000a). Women who have experienced IPV are more likely to suffer from a range of acute injuries, exacerbation of existing problems, and development of new diseases and chronic illnesses, at rates much higher than their

non-abused counterparts (Campbell, 2002). Few studies have considered an association between victimization-related illnesses and the incidence and types of surgery that abused women undergo.

Perioperative nurses are responsible for the care of patients before, during, and after surgery and are well positioned to assess and support victims of abuse. In general, perioperative nurses play a critical role in ensuring the surgical patients' safe passage through the surgical experience and may be uniquely positioned to obtain an accurate abuse assessment and provide appropriate resources to abused women in an effort to improve their overall health and safety.

This research examines the relationship between women's history of victimization and surgery. Specifically, this study assesses the prevalence of histories of child maltreatment and IPV in women scheduled for an elective surgical procedure. Types of surgical procedures of women who have been victimized are identified. To further examine the influence of a history of child maltreatment or IPV on women in the study, state and trait anxiety have been measured. A subset of the study population who identify themselves as experiencing IPV in their current relationship were surveyed postoperatively in order to explore the influence that a history of child maltreatment or IPV might have on one's perceptions of the perioperative experience.

It is my hope to improve the care and support of female perioperative clients who struggle with the memory of childhood maltreatment or past or current IPV. Findings of this study may assist perioperative registered nurses in providing research-based, individualized care to these clients. Knowledge derived from this study may help to inform perioperative nurses how to better address and meet the specific needs of battered women.

A. Background of the Study

There is an extensive body of literature and research describing the consequences of IPV and history of child maltreatment on the health of adult women. Abused women utilize healthcare resources at higher rates than the general population without considering acute injuries and trauma. This relates to the consequences of victimization as a child or as an adult, which increases susceptibility to depression, post-traumatic stress disorder (PTSD), and other psychological or physical health symptoms (Eby, Campbell, Sullivan, & Davidson, 1995; Kendall-Tackett, 2000).

In an examination of utilization of health services by women who suffered child maltreatment or IPV, few studies were found in which the collective effects of the childhood maltreatment and/or IPV across the lifespan were studied. More specifically, limited evidence exists with regard to possible relationship between IPV, history of child maltreatment, and incidence and type of surgery women undergo.

It is particularly challenging to determine what relationship may or may not exist due to barriers and resistance to screening women for abuse across their life span. This makes it difficult to estimate the extent of the abuse problem and its cumulative effects.

B. Purpose of the Study

The purpose of this study was to examine the relationship between women's history of victimization – defined as maltreatment as a child only, IPV as an adult only, or both – and elective surgical intervention. A long term goal of this study is to improve health care of women with a history of child maltreatment, and/or IPV by identifying strategies for screening, assessment, and intervention in the perioperative environment.

In order to ensure optimum care, screening for abuse is suggested for all women at every point of entry into the health care system; absence of acute injury is not a reason to eliminate screening for IPV. This study, in addition to an examination of prevalence of a history of IPV or child maltreatment in women who are scheduled for surgery, identifies different types and frequency of surgeries that women who have a history of childhood maltreatment and/or IPV have experienced.

I examine the relationship between the cumulative effects of women's victimization across the life span and the need for surgical intervention during their lifetime. A comparison of the incidence of surgeries experienced by women who are survivors of maltreatment as children and/or IPV with women who have never experienced child maltreatment or IPV has been completed. Only women scheduled for elective surgical procedures were included in the study population. Types of surgery were examined.

In order to gain a perspective of the unique perioperative experiences of women, during the postoperative period, I recontacted participants who in the preoperative interview acknowledged ongoing IPV. The women were offered an opportunity to share their perspectives of the perioperative experience and suggestions for improving nursing care.

C. Research Questions

The focus of this study is the cumulative effects of victimization, the relationship of history of victimization on a woman's need for surgical intervention, and the number and types of surgical interventions a woman who has experienced either child maltreatment, IPV, or both may undergo. Levels of state and trait anxiety in the participants are also examined. The following research questions are examined:

1. Are women who have suffered child maltreatment only, IPV only, or both during their lifespan more likely to undergo surgical interventions than women who have no history of victimization?
2. Are women who are victims of child maltreatment, IPV, or both more likely to undergo specific types of surgical intervention than women who have no history of victimization?
3. Do women with a history of child maltreatment, IPV, or both experience higher levels of state (pre-operative) and trait anxiety as measured by the State-Trait Anxiety Inventory for Adults (STAI), than women who have no history of violence?
4. How do women who are victims of IPV in their current relationship describe their recent experience as a patient in a perioperative setting?
5. What are the gaps in care or unmet needs identified by women who are currently experiencing IPV and who have recently been patients in a perioperative setting?

D. Definition of Terms

Intimate Partner Violence

Intimate partner violence or victimization (IPV) includes “actual or threatened physical and/or sexual violence or psychological and emotional abuse (or any combination of these types) directed toward an intimate partner (or former intimate partner)” (Centers for Disease Control & Prevention [CDC], 2000). Primarily perpetrated by men against women, IPV consists of a pattern of behavior noted over time and characterized by strong elements of control by a man over the

behavior of his partner (Bullock & Schornstein, 1998; Coker, Smith, McKeown, & King, 2000; Griffith-Kenney, 1986; Hanmer, 1996; Kaufman Kantor & Jasinski, 1998; Schornstein, 1997).

The term “battered woman” is used interchangeably with “abused woman” (Campbell & Humphreys, 1993). The phenomenon encompasses perpetrator behavior that is physically, psychologically, or sexually aggressive, singly or in combination. Battering often includes forced sex in intimate relationships. Battering is a pattern of aggressive or violent behavior and does not represent separate or isolated acts of aggression. The primary perpetrators of battering are men and the focus of their aggression is their female partners (Campbell & Humphreys, 1993).

In this study, IPV addresses the occurrence of the phenomenon in women who are at least 18 years of age and no older than 65 years of age. IPV is measured by using the four subscales of the Revised Conflict Tactics Scale (CTS2): psychological aggression, physical assault, sexual coercion, and physical injury.

Child Maltreatment

Experts agree childhood abuse or victimization continues to be a significant public health issue (Kendall-Tackett, 2003). Due to a lack of standardized definitions and reporting mechanisms the extent of the problem is not fully known; however, it is widely recognized that the experience continues to plague victims long after the abuse has occurred (Finkelhor & Dziuba-Leatherman, 1994; Heise, Ellsberg, & Gottemoeller, 1999; Walker et al., 1999).

According to Plichta and Falik (2001), in a study of 1,821 women aged 18 to 64 years, 324 women had experienced abuse as a child. Recurrent abuse was acknowledged by 262 of the women. Nearly all of these women indicated that the perpetrators of the abuse were known to them, primarily as either a family member or close family friend. Significant results in the study

included findings that survivors of sexual intimate violence (including child sexual abuse) was related to poorer physical and mental health in adulthood.

Felitti and colleagues (1998) examined history of child abuse as a “basic cause of morbidity and mortality in adult life” (p. 246). From a sample of over 8,000 adult members of a health maintenance organization, it was found that those with more exposures to abuse as children, experienced higher numbers of negative health effects as adults compared to those with less or no history of child abuse. In this study, childhood abuse included psychological, physical, and sexual abuse. Household dysfunction was also studied and was defined separately; however, it was noted that the different categories were very much interrelated.

In the present study, physical, sexual, and emotional victimization or neglect that occurred before the age of 18 are referred to as “child maltreatment.” This definition is based on current information available through the Centers for Disease Control (CDC). Eight questions measure child maltreatment, elicit the age at which the victimization occurred, and if it was perpetrated by either a family member/someone known to the victim or by a stranger. Witnessing violence as a child is included in this definition.

Women with No History of Victimization

In this study, a “non-victimized” woman refers to study participants who when asked, acknowledged no personal experience of maltreatment as a child or IPV as an adult. Additionally, these women were not considered “positive” for IPV or child maltreatment according to the definitions utilized for the study (positive score on the CTS2 or child maltreatment index).

Perioperative Nursing

This specialized area of nursing refers to care of the patient undergoing a surgical procedure. Specifically, it includes three stages: care of the patient before, during, and after surgery or preoperative, intraoperative, and postoperative care. These phases begin when the decision is made for surgical intervention and conclude when the patient is fully recuperated. Perioperative nursing can take place in any setting where surgical intervention is performed such as in an operating room in an acute care setting, or in the community such as in a physician's office or free-standing surgi-center. In this study, the focus is on female patients who are scheduled for surgical intervention in the department of perioperative services in an acute care facility.

State Anxiety

State anxiety refers to an individual's emotions at a particular moment in time (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The concept addresses personal characteristics that one exhibits during a challenging or uncomfortable situation or event. State anxiety is transitory in nature. In this study, state anxiety refers to pre operative anxiety or anxiety experienced prior to a scheduled surgical procedure.

Trait Anxiety

Trait anxiety refers to one's tendency to "perceive the world in a certain way" and "to react or behave in a specified manner with predictable regularity" (Spielberger et al., 1983, p. 5). It assesses how people generally feel on a day-to-day basis. In a threatening situation, an individual with a stronger trait anxiety will have a greater chance of experiencing more intense levels of state anxiety.

Surgical Procedures

The term, surgical procedure, refers to surgical or other invasive procedures that take place in a perioperative setting or surgical environment and require general, regional, local, or conscious sedation. Invasive radiological procedures have been excluded from this study as they are typically performed outside of the traditional operating room setting, usually in the radiology department.

Surgeries are grouped in two ways: according to like or similar types of surgery and according to the extensiveness and seriousness of the procedure, major versus minor. This replicates the surgical groupings developed in the Hastings and Kaufman Kantor study (2003). Major surgery includes procedures such as abdominal, pelvic, thoracic, spine, reconstructive, and cardiovascular surgery that require extended hospital stays in inpatient settings. Amputations, exploratory procedures, and joint replacements have also been placed in this category.

Minor surgery includes procedures that are done on a one-day or ambulatory surgery basis, do not typically warrant overnight hospitalization or inpatient nursing care, and, in general, require shorter recuperation periods. Dilatation and curettage (D&C) and most nasal, ophthalmic and otologic surgeries are included in this category.

E. Assumptions

The following assumptions were made by the researcher and are supported in a review of the literature:

- 1) Subjects answer research questionnaires honestly and accurately.
- 2) Subjects are able to comprehend the consent form and the directions for completion of the interview.

- 3) Subjects respond to questions and further communicate with the researcher if they feel safe to do so.
- 4) Measures of State-Trait Anxiety Inventory for Adults (STAI), psychosocial aggression, physical assault, sexual coercion, physical injury (CTS2), and child maltreatment (Child Maltreatment Index or CMI) are reliable and valid instruments.
- 5) Awareness of the impact that screening, nursing assessment of victimization history and appropriate intervention have on the health of adult women scheduled for surgery ultimately contributes to higher quality of nursing care for victims of child maltreatment and IPV.

F. Limitations of the Proposed Study

Study results are influenced by the willingness of participants to share personal information. Fear, embarrassment, denial, or loss of memory about details of the childhood maltreatment or adult IPV can result in an underestimation of the history or presence of victimization in this sample of women. Some women who have experienced childhood maltreatment or IPV as an adult may not acknowledge their experience as abusive. The quantitative component of the study is cross-sectional; therefore, results determine whether or not a relationship exists between victimization history and surgical intervention, but causation of that relationship is not shown.

This study was limited by the ethnic and economic demographics of the residents of the area. The sample of women who were included in the study had accessed a healthcare facility in a rural location in the northeastern United States. Permanent residents of this geographic area are

predominantly Caucasian, are of European descent, and maintain among the lowest reported rates of poverty in the country (U.S. Census Bureau, 1997). These factors greatly impact generalizability of the findings.

G. Significance to Nursing

It is my hope that the sharing of findings from the study will initiate dialogue with other nurses, perioperative nurse colleagues, in particular. Nursing interventions that enhance perioperative experiences and support for women, who may return to potentially unsafe home situations in a more vulnerable state, are two topics for future research. An evidence-based change in perioperative nursing practice will ultimately improve care of battered women and female survivors of childhood maltreatment.

More than ten years ago, national nursing organizations including the American Nurses Association in 1991, the American College of Nurse-Midwives in 1995, the Emergency Nurses Association in 1996, and others began to publicly acknowledge concern for the health consequences of IPV to women (American Association of Colleges of Nursing [AACN], 1998). These organizations have worked diligently to encourage and support studies focused on domestic violence as a significant women's health issue. They continue to educate nurses about the dynamics of IPV and appropriate nursing responses: screening, assessment, and intervention with battered women who present for care. In fact, nurses and other clinicians in a wide variety of health care settings such as emergency departments, inpatient settings, primary-care settings such as clinics and doctors' offices, obstetrical and gynecological practices including family planning centers, mental health providers, and pediatric settings have benefited from such training efforts.

The Perioperative Setting

Berrios and Grady (1991) reported that early recognition of the presence of violence in a relationship could prevent the occurrence of related chronic illness. Many severely battered women require surgical intervention for injuries sustained as a direct result of the battering experience. Although large numbers of battered women ultimately require surgical intervention for the treatment of injuries, surgical clinicians have rarely been involved in nationwide efforts to decrease the morbidity or mortality associated with IPV. In fact, no published studies were found that specifically addressed screening of clients in the perioperative setting or that focus on appropriate interventions for clients receiving care from perioperative nurses.

Provision of the highest-quality nursing care to women who have experienced IPV is critical. Perioperative nurses are well-positioned to be successful as they often care for patients who are physically isolated from their partner during the intraoperative phase of care, and thus have the opportunity to complete an accurate abuse assessment and offer appropriate support and resources.

The perioperative environment is unique in that it is a setting in which client privacy can often easily be achieved. Family, who in most perioperative settings are encouraged to stay prior to surgery, are generally not allowed to follow patients into the surgical suite or in the postanesthesia care unit (PACU) following surgery. Such opportunity for privacy could meet the needs of the client if she chooses to reveal a history of victimization to a health care provider.

The interview or interaction may not be the first exposure a woman has had to such screening for intimate partner violence. Having reached a point that surgery has been deemed necessary, it is probable that women have had at least one interaction with a health care provider. To better meet the needs of battered women, this study does contribute to the knowledge base

and rationale related to routine screening at different points of entry into the health care system. The focus of this study is the perioperative or surgical setting, a unique clinical area where large numbers of victims of abuse seek services or intervention for a variety of health care needs.

To provide optimum care, all nurses, including perioperative nurses, should view an abuse assessment as appropriate intervention in the lives of women. This study supports McFarlane and colleagues' position that ... "If abuse is to be prevented and the health and well-being of women promoted, nurses in all settings must take the initiative in assessing all women for abuse during each visit, and offer education, counseling, and referral information" (McFarlane, Christoffel, Bateman, Miller, & Bullock, 1991, p. 249).

II. REVIEW OF LITERATURE

A. Introduction

A stress-illness linkage serves as a framework for this study. The cumulative effects of personal stress, anxiety, and tension can result in physical illness or other negative health symptomology (Selye, 1956, 1974). Similarly, the cumulative effects of IPV as an adult and the stressor of interpersonal violence experienced in childhood can result in women experiencing poorer health symptoms as compared to their nonabused counterparts (Campbell et al., 2002; Coker, Smith, Bethea, et al., 2000; Kendall-Tackett, 2003; Plichta & Falik, 2001). This may result in a higher incidence of surgical intervention over the life course (Hastings & Kaufman Kantor, 2003). This study has been designed with the belief that perioperative registered nurses can play a vital role in improving the quality of care for women who have a history of IPV.

Intimate Partner Violence (IPV)

Physical assault of women by intimate partners is a frequent health care issue (Campbell, 2002; Campbell et al., 2002). It is widely recognized as a leading cause of injury to women in this country (Abbott, Johnson, Koziol-McLain, & Lowenstein, 1995; Flitcraft, 1997). Data suggest that approximately 50% of all battered women also report being sexually abused by their partners (Brendtro & Bowker, 1989; Campbell, 1998; Eby et al., 1995).

IPV is responsible for an estimated one-quarter to one-half of all women presenting for treatment in emergency rooms (U.S. Department of Justice, 1998). Women who have been battered or sexually assaulted utilize health care services at much higher rates than women who have not experienced abuse (Bergman & Brismar, 1991; Coker, Smith, Bethea, et al., 2000; Koss et al., 1991; McCauley et al., 1995) and have health care needs that go beyond the original

trauma. Nearly one-third of women injured during their most recent physical assault sought treatment from a health care provider (Tjaden & Thoennes, 2000b).

To date, most nursing and medical research on the linkages between domestic/intimate partner violence and women's health status have focused on the high rates of abuse during pregnancy (Brendtro & Bowker, 1989; Helton, McFarlane, & Anderson, 1987; Horan, Chapin, Klein, Schmidt, & Schulkin, 1998) or the severity of abuse experienced by women seeking care in hospital emergency departments (Abbott, 1997; Abbott et al., 1995; Dearwater et al., 1998; Ellis, 1999; Kyriacou et al., 1999; McLeer & Anwar, 1989; Stark, Flitcraft, & Frazier, 1979; Tilden & Shepherd, 1987). Fewer studies have looked at issues related to IPV experiences among adult women seeking care in primary and ambulatory care settings (Bullock, McFarlane, Bateman, & Miller, 1989; Freund, Bak, & Blackhall, 1996; McCauley, Kern, Kolodner, Derogatis, & Bass, 1998; McNutt, Waltermaurer, McCauley, Campbell, & Ford, 2005).

Plichta and Falik (2001) suggest that all health care providers address the presence or history of violence in the lives of patients. In their study of data from over 1800 women aged 18 to 64 years, they estimated that nearly 50% of American women have been victims of at least one form of violence either as a child (17.8%), or as an adult victim of physical assault (19.1%), sexual assault (20.4%), or IPV (34.6%). Most women, however, have not discussed their victimization history with a physician. In fact, battered women identify more barriers than nonabused women in their effort to seek health care. Despite increasing evidence to support a relationship between victimization and poorer physical and mental health, health care providers do not routinely screen for history of victimization (Lehmann, 2002; Plichta & Falik, 2001; Poirier, 1997; Rodriguez, Bauer, McLoughlin, & Grumbach, 1999).

McNutt, Carlson, Persaud, and Postmus (2002) studied the effect that a lifetime history of abuse including child maltreatment, and past or present IPV has on adult physical health and health behaviors. Women between the ages of 18 and 44 years, who had been recent patients in a primary care setting (n=557), participated in a telephone survey during which subjects were questioned about history of personal violence as a child or adult. Participants were also asked about personal health history related to common physical symptoms typically treated in a primary care practice.

Nearly half of the women in the study had experienced recent IPV and were more likely to report past IPV and child maltreatment than those with no recent IPV experience. The authors found that lifetime history of victimization (IPV or child maltreatment) was associated with an increase in reported physical symptoms or negative health behaviors.

According to McNutt et al. (2002), physical symptoms experienced by this population include both the direct result of the injury or trauma as well as more long term effects related to the ongoing presence of stress related to the abuse history resulting in symptoms such as chronic headache and pain. Knowledge of a person's lifetime victimization history may lead to more appropriate interventions and ultimately improved health outcomes for women in this population.

Healthcare needs associated with ongoing IPV are an issue for women of all ages. Zink, Jacobson, Regan, and Pabst (2004) completed a qualitative study of 38 female victims of IPV over the age of 55 years. They found that although women in this age group, as in younger age groups, may have difficulty discussing issues related to ongoing violence in their intimate relationship, confidential dialogue between health care providers and victims as well as provider awareness of appropriate resources for victims of IPV is essential. The discussion includes the need for providers to be empathetic in their interactions with victims, competent in their ability

to identify the abuse, and knowledgeable about the relationship between ongoing IPV and negative health symptoms. In addition, the authors agree that provider awareness of appropriate resources and referrals and the understanding that offering options or choices to victims of IPV is more beneficial to a woman's well being than telling her which choices she should make is the most effective intervention.

Costs of Violence

Health care for victims of domestic violence is costly. According to a report from the U.S. Department of Justice (1998), approximately 150 million dollars annually is attributed to the cost of health care and other crime-related services to women who have experienced IPV. Wisner, Gilmer, Saltzman, and Zink (1999) found that the annual health care of abused women utilizing hospital services was \$1,775 more per client than for members of the health plan not identified as victims of domestic violence. The authors concluded that early identification and treatment and/or intervention for battered women would probably benefit health care systems as the practice would result in cost-savings in the future.

Due to the long term health effects of childhood victimization, women who are survivors of victimization as children experience a significant increase in health care costs. Walker and colleagues (1999) examined the history of childhood maltreatment (child sexual abuse [CSA], physical abuse, emotional abuse, emotional neglect, physical neglect) in 1,225 adult female members of a health maintenance organization (HMO) who completed 22-page questionnaires. Measurement of childhood maltreatment was accomplished through use of the Childhood Trauma Questionnaire (CTQ), a reliable and well-validated instrument. Associated health care costs were obtained through the accounting system of the HMO.

Childhood maltreatment was reported by over 40% of the respondents and as expected, findings from the study revealed that a history of childhood maltreatment is significantly associated with increased numbers of health care visits for women. Additionally, women with histories of childhood maltreatment were noted to have significantly higher health care costs as adults than their nonabused counterparts. Women who had experienced CSA had annual health care costs that were on average over \$200.00 greater than the costs incurred by their nonabused counterparts. As predicted, these women had a significantly higher number of primary care and outpatient costs and visited emergency departments more frequently than women who were not maltreated as children.

Women who acknowledged any history of child maltreatment experienced significantly higher annual health care costs – nearly \$100 greater – than their non-victimized counterparts. Although the cost per person may not seem extraordinary, if one were to look at the total additional dollar cost to the HMO, the numbers become even more noteworthy. History of IPV as an adult was not measured in this study, although the addition of that variable would have been of interest.

B. Conceptual Framework

Stress-Illness Linkage

There is longstanding theoretical and empirical support for a stress-illness linkage (Dohrenwend & Dohrenwend, 1974; Turner & Lloyd, 1995). For the most part, researchers have examined the association between social stress, life stress, and outcomes related to emotional health and well-being. Adversity and victimizations across the life course such as childhood maltreatment and adult trauma including rape and psychological and physical abuse by intimate

partners are also associated with psychological distress or physical illness (Barr, Boyce & Zeltzer, 1996; Bohn & Holz, 1996; Browne & Finkelhor, 1986; Giles-Sims, 1998; Heim et al., 2000; Kendall-Tackett, 2003; Leserman et al., 1996; Thakkar & McCanne, 2000). The actual physiological mechanism underlying victimization-illness associations, however, has been only minimally examined by researchers in the field of family violence.

Dr. Selye

One of the first scholars to study a stress-illness or mind-body connection was Dr. Hans Selye. Selye (1956, 1974) in his work in the discovery of stress and its effect on one's physical and emotional well-being examined the body's ability to deal with or adapt to stressors from a biochemical perspective. In defining the concept of stress, Selye referred to the "nonspecific response of the body to any demand made upon it" (1974, p. 27). This response is due in part to the neuro-endocrine and hormonal mechanisms in the body.

The general adaptation syndrome (GAS) also known as the biological stress syndrome includes the identification of three stages: the alarm reaction, the stage of resistance or adaptation, and the stage of exhaustion, all of which are somewhat interdependent. The alarm reaction refers to the first stage of the GAS. It is defined as a "bodily expression of a generalized call to arms of the defensive forces in the organism" (Selye, 1956, p. 31).

Following the alarm reaction is the stage of resistance during which the body attempts to physiologically resist the change. If exposure to the stressor continues, the body can no longer maintain adaptation and the state of exhaustion occurs. During this final stage, the body returns to the state of alarm experienced in the first stage of the GAS.

This characterization of the stress experience guides understanding of the way the body defends itself against stress. It describes an attempt by the body to fight or adapt to the stressor. The final stage – exhaustion – occurs when the body is unable to continue to resist the stressor.

In this study, I examine the effect that a stressor – presence of or history of IPV or child maltreatment – might have on a woman who has experienced such victimization. Selye's work is used to enhance understanding of the health consequences that can occur as a result of the victimization. Having first attempted to fight or adapt to the presence or history of victimization, a woman may become exhausted and no longer have the ability to continue to fight. At this point, physical and psychological symptoms can occur. According to Selye (1974), symptoms may not occur until long after the event has taken place.

Scientists have long known that during times of stress, parts of the brain emit a chemical signal which in turn causes the adrenal gland to pump out large amounts of stress hormones, including cortisol. The stress hormones flood the body and produce a wide array of effects designed to get ready to fight or flee such as an increase in alertness, heart rate, and activity. During acute stress, a feedback system kicks in and the response is shut down fairly quickly; however, during chronic stress – which a victim might understandably experience in a relationship comprised of IPV, for example- the system keeps going resulting in a weakened immune system and hence an increased susceptibility to negative health symptoms.

In reflecting on this study, it was interesting to note Selye's comments on coping. His discussion of interpersonal relations being based on memories of previous similar experiences further describes the way in which his model serves as a framework for this study. A woman who has been victimized as a child or as an adult might be expected to respond to a person or situation based on her memory of a previous interaction or event. If that event was an especially

violent or traumatic one, one might expect a response based on that previous event. This could include negative physical or psychological health consequences.

Selye's model continues to be relevant in today's health care climate. He offers an alternative approach to traditional health care. As Selye stated "...instead of complicated drug therapies or surgical operations, we can often help ourselves better by identifying the decisive cause, which may be a member of our family..." (1974, p. 128). In acknowledging a stress-illness linkage, clinicians must be open to further exploration into the cause and underlying reasons of pathology and disease.

Drawing on a body of research established by neuroscientists (Schwartz & Perry, 1994), Kendall-Tackett (2000) speculated on the causal paths that link childhood victimization with chronic illness experienced by adults. For example, higher levels of depression and post-traumatic stress disorder (PTSD) are well established among adults who have experienced abuse as children. According to Kendall-Tackett (2000), persons who have experienced significant trauma in their lives are more vulnerable to the effects of subsequent stressors, resulting in a state of hyperarousal. This means that the body overreacts to subsequent new stressors by regularly producing excessive levels of stress hormones, for example, cortisol. Hyperarousal subsequently may manifest itself in a number of symptoms and conditions including PTSD, depression, and irritable bowel syndrome. Childhood abuse and adversity may exert independent effects on current health status. Additionally, there may be cumulative effects of multiple forms of victimization on adult health status.

Developmental traumatology has been defined by DeBellis (2001) as "the systemic investigation of the psychiatric and psychobiological impact of overwhelming and chronic interpersonal violence (child maltreatment) on the developing child" (p. 539-540). It involves

research related to the effects of stress and trauma on childhood development and served as the theoretical model for his review. In his examination of the stress associated with child maltreatment, DeBellis (2001) noted the resultant health effects on physical and psychological development as well as on the biological stress response system in children who have experienced chronic abuse. “Child maltreatment has a traumatic impact on biological development and is a negative life altering experience for children” (DeBellis, 2001, p. 558).

One important focus in his discussion was regarding the relationship of the perpetrator of the maltreatment to the victim, who in many cases was a family member or other trusted adult figure. The resultant distrust, anxiety, and depression in the child can lead to many health-related issues.

Heim and colleagues (2000) found in their study of women between the ages of 18 and 45 years (n=49) that women with a history of childhood abuse experienced an increased pituitary-adrenal and autonomic response to stress compared to the nonabused group. These findings suggest that women who had experienced abuse as children are at greater risk for psychopathological conditions as adults. The researchers concurred that stressors in adulthood may potentiate the effect of the childhood trauma which may result in psychological symptoms such as depression or anxiety.

Kendall-Tackett (1999) examined 130 records of “essentially healthy” patients in an adult primary-care practice in northern New England. This researcher determined that patients who identified as having a history of victimization were significantly more likely to be diabetic or to have symptoms of diabetes (according to a self-administered review of systems questionnaire) than were their nonabused counterparts.

In a pilot study exploring biopsychosocial processes in battered women, Constantino, Sekula, Rabin, and Stone (2000) examined whether a difference exists in numbers of negative life events, depression, and T-cell/lymphocyte function for abused women when compared to nonbattered women. When comparing this group of abused women to non-abused women, the researchers found that the abused group had significantly more negative life experiences, more depression, and reduced T-cell function than the nonabused group. Lymphocytes are a measure of immune function and play an important role in one's physical ability to fight disease, and are decreased in chronic stress situations. This study supported a stress-illness linkage in battered women.

A battered woman may be forced to endure ongoing stress, discord, sadness, and emotional and physical pain in her relationship with her partner. If health care providers recognize that this experience can affect the body's ability to fight illness and disease, the relationship between emotions and physical illness does become clearer. Constantino et al. (2000) also acknowledged the lasting health effects of the battering relationship and cite the presence of negative health symptoms in battered women long after the abuse has stopped.

In a recent study, McCain, Gray, Walter, and Robins (2005) utilized a psychoneuroimmunologic (PNI) framework to guide their examination of physical symptoms that influence overall health and well-being. PNI is identified as the study of the immune system and how it is related to the effects of psychological and physiological symptomology. A PNI framework addresses "the negative impact of perceived stress on health outcomes, primarily as a function of immunosuppression mediated by elevated cortisol" (McCain et al., 2005, p. 324). Although the subjects in the study were not survivors of abuse, (they were patients who had been diagnosed with one of two life threatening illnesses), the implication is that individuals who have

experienced stress-related events (such as victims of abuse) will benefit from nursing interventions that are designed to improve individual response to stress.

Woods, Page, et al. (2005) utilized a biopsychimmunologic framework to guide their study (n=111 women) of the relationship between IPV and mental health symptoms and whether or not PTSD symptoms mediate the effect of IPV on pro-inflammatory cytokine levels. (According to Rote, 1994, cytokines in the body guide cellular activity and their presence is necessary for an appropriate immune response to occur). This theoretical framework incorporates the effects of trauma on the stress response and specifically, IPV as the source of the trauma. Over time, the presence of IPV as chronic stressor affects the hormonal response and results in an abnormal cortisol level which can ultimately lead to long term health issues.

The researchers found that the effects of IPV, including emotional abuse, were evident long after the actual abuse had ended. They suggest that IPV be considered as a possible cause when women present with symptoms related to PTSD; however, due to the reported high prevalence of IPV, their recommendation is that all women be screened for history of abuse. Intervention that has been suggested includes safety planning and appropriate community referral.

Rubin and Gardner (1999) provided a case report of a 29-year-old woman, with a history of child abuse coupled with ongoing IPV. They asserted that this not only affected this client medically and psychologically, but the abuse also affected the woman's relationship with her physician and the general success of the medical encounter. Sharing different aspects of her life with each individual practitioner (therapist/physician) led to less than optimum care. Although both clinicians were aware of this woman's history of child abuse, neither was aware of the

presence of IPV. In fact, the therapist did not learn about the abuse until the client was at least six months into therapy.

The treating physician remained unaware of the extent of the ongoing abuse in the patient's life. It was only when the physician consulted the therapist about this client and her "changing story" that he learned of the IPV in the patient's current relationship with her husband. Unfortunately, in this situation, neither practitioner had sufficient information to support the client in enhancing her self-awareness or assessment of her own situation. Interestingly, when the patient eventually separated from her husband, she simultaneously became aware of the existence of a mind-body connection: she began to notice that her anxiety and physical symptoms decreased when she was not in the presence of her husband.

In order to achieve optimum outcomes and coordination and continuity of care, a more streamlined interaction between clients, physicians, and therapists is essential. In this situation, the physician's and therapist's knowledge of the woman's history of victimization may have assisted both practitioners in enhancing the patient outcome in part, by offering the client education about the connection between her history and physical symptoms. In addition, such knowledge may have aided the physician in the ability to obtain a more accurate medical diagnosis. The therapist may have gained a greater understanding of the client's exhibited need for increased visits (Rubin & Gardner, 1999).

Although Selye conducted a number of early studies on the mind-body connection, many of the earlier stress researchers may have underestimated the contributions of cumulative adversities to emotional distress (Turner & Lloyd, 1995). Further elaboration of the biological effects of stress linked to victimization experiences are seen in studies looking at wound healing. Marucha, Kiecolt-Glaser and Favagehi (1998) examined a small sample of dental students

(n=11: 9 men, 2 women) and the effects of stress on wound healing. Their findings supported the thesis that immune function is negatively affected by stress. Even in this group of well-seasoned test takers, wound repair (of wounds purposefully placed on the hard palates of the subjects) was diminished during a time of moderate emotional stress – academic testing – as compared to healing time measured on the same student during a time of decreased stress – vacation. Although small and not representative of the population, this study provided further support for a stress-illness connection: when a stressor was present in the lives of the students, their healing ability was diminished.

Similarly, Glaser et al. (1999) investigated the effect of stress or fear on surgical outcomes such as wound healing. Citing research that psychological stress delays wound healing, they investigated 36 postmenopausal women and found that psychological stress can have marked adverse consequences for immunologic activity that must occur at wound sites for healing to take place. The women who reported higher stress levels produced lower levels of cytokines, which are important for wound healing, and higher levels of cortisol, an immunosuppressant, which inhibits the inflammatory response thereby causing poor wound healing and increased susceptibility to infection (McCance & Shelby, 1994).

C. Health Consequences of Victimization

Acute Health Consequences

Intimate partner violence is a significant risk factor for many injuries, systemic disorders, and diseases and is well documented in the literature. Facial lacerations, skull, neck, and orbital trauma can occur as a result of direct force or assault to the head, neck, and face (Hartzell, Botek, & Goldberg, 1996; Ochs, Neuenschwander, & Dodson, 1996). Various types of fractures have

been documented in women either from direct force or as the result of the victims' attempts to defend themselves from physical assault. Fulton (2000) identified a number of acute physical injuries that might be attributed to domestic violence including injury to the head, face and neck area, breast, chest, abdomen, or genitalia. She also acknowledged a substantial prevalence of IPV during pregnancy and notes that this often results in injury directed more toward the torso.

Direct force to the chest can produce pneumothorax. Internal injuries to the spleen, liver, and kidney occur when patients are punched or kicked in the abdomen or back. Forced sexual intercourse can cause vaginal bleeding, vaginal or anal tearing, or lead to hemorrhoids (Campbell & Soeken, 1999). Acute injuries such as bruising, skeletal fractures and injuries to the head and face have been noted by Coker, Pope, Smith, Sanderson, and Hussey (2001).

Chronic Health Symptoms

A history of child maltreatment and IPV can lead to serious long term health consequences. Chronic complaints such as headaches, abdominal pain, fatigue, and musculoskeletal or soft tissue pain, and multiple hospital admissions for undefined conditions could be indicative of violence in a relationship (Bullock & Schornstein, 1998). Fulton (2000) noted the possible linkage between physical complaints that seemingly have no physiological explanation and presence of domestic violence. She proposed that the phenomenon of chronic pain could be the physical result of the ongoing presence of stress in a relationship that is abusive in nature.

The effects of victimization on gynecologic symptoms such as pelvic pain, bladder infection, and dyspareunia (Eby et al., 1995), cervical cancer (Coker, Sanderson, Fadden, & Pirisi, 2000), and gastrointestinal disease such as dyspepsia, abdominal pain, or irritable bowel syndrome (IBS) have also been examined (Drossman et al., 1990; Drossman, Talley, Leserman,

Olden, & Barreiro, 1995; Talley, Fett, & Zinsmeister, 1995). In their work, Coker, Smith, Bethea, et al. (2000) have identified such chronic health issues as IBS, stomach ulcers, diarrhea, constipation, chronic pain, frequent headaches, seizures, sexually transmitted infections, pelvic inflammatory disease, chronic pelvic pain, a variety of infections of the urinary tract, arthritis, indigestion, angina, and hypertension as associated with IPV. They assert that chronic physical conditions may be the result of ongoing stress in the lives of the women experiencing battering.

Heitkemper and colleagues (2001) have acknowledged that people who are survivors of abuse, either as children or as adults, are more likely to experience adverse health outcomes long after the abuse. In this study, they performed a secondary analysis of data from a community-based sample comprised of adult women with IBS and those who did not have IBS. Data from women with IBS was then further analyzed according to whether or not history of abuse as children or as adults was identified.

The IBS groups included adult women between the ages of 18 and 40 who had been previously diagnosed with IBS. One group (n=88) included women who had experienced symptoms within the month prior to the study and the second group, the control group (n=165), was comprised of women who were asymptomatic. The purpose was to determine whether or not women with IBS who are survivors of abuse either as adults or as children have more severe GI symptoms, greater psychological distress, and /or greater physiological arousal than women who had not been abused.

A prevalence of childhood sexual abuse (CSA) history was found to be elevated in adult women who suffer from IBS as compared to women who do not have IBS. Furthermore, these women utilized healthcare services significantly more often than women with no history of abuse. Within the groups of women with IBS, increased psychological distress was noted in

those who reported a history of abuse as children and adults. Additionally, these women experience a greater impact of GI symptoms on their daily activity than nonabused women with IBS.

Five pathways have been cited that provide a framework for enhancing understanding of the variety of ways that a history of childhood victimization might have on overall health status as adults (Kendall-Tackett, 2003). Physiological function, behavioral response, cognition, and social and emotional well-being serve as a guide to an in-depth study of the many ways that child maltreatment might affect one's general health or more specifically, the negative health consequences that victims of child maltreatment might experience as adults. Although few health care providers currently inquire about or assess abuse history, the many health consequences that might result from a history of victimization are well documented in the literature.

The effect that a history of maltreatment as a child or intimate partner violence as an adult has on a woman's overall health may include a number of chronic stress-related symptoms such as indicators related to signs of PTSD (Woods & Wineman, 2004). As mentioned earlier, stress related effects of violence such as the production of excessive levels of stress hormones like cortisol may over time lower immune response in women leading to an increased likelihood in physical health problems and in some chronic conditions such as pain.

Woods (2005) studied the association between history of IPV and presence of PTSD symptoms in women and the effect they might have on overall physical health including adequate immune function. She noted the relationship between PTSD and decreased cortisol levels and acknowledged that over time, victims of IPV may experience changes in physiologic and immunologic response that is similar to the experience of individuals who have survived chronic stress caused by other sources.

Woods, Wineman, et al. (2005) studied women (n=126) with histories of either child maltreatment or IPV and women with no history of abuse (n=12) to investigate presence of PTSD and response to indicators of immune status. Among their findings, they reported that the abused group experienced significantly more PTSD symptoms when compared to the nonabused group. Their findings support the premise that stress related effects of violence may in time lower immune response in women, which ultimately puts women at greater risk for chronic physical health problems.

Woods and Wineman (2004) conducted a study with a convenience sample of 50 women, all of whom had a history of abuse but had been out of the battering relationship for a minimum of one year. The authors found that the longer women stayed in a battering relationship, the more physical health symptoms she tended to experience. They also found that PTSD hyperarousal was positively associated with physical health symptoms. It is of interest that over half of the women in their study met the criteria for a diagnosis of PTSD. Findings from this study have implications for assessment of women for history of abuse. Because of the likelihood of long term health effects in women who have a history of childhood victimization or sexual abuse as an adult, Woods and Wineman (2004) recommend that in addition to asking about history of IPV, all women be screened for history of childhood maltreatment and adult sexual assault.

Woods, Page, et al. (2005) conducted a study to determine if PTSD symptoms mediate the effect of IPV on pro-inflammatory cytokine levels. They compared 62 women with a history of IPV with 39 women who had never been abused and found that these levels were higher in abused women and in women with current PTSD symptoms. It was determined that the mental health effects related to history of IPV help to explain the differences in physical health and immune function outcomes in women with history of abuse.

It is of particular interest that the authors highlighted the important role that presence of emotional abuse plays in overall women's health. They found that symptoms of negative physical health were present long after the physical or emotional abuse had occurred.

Finestone and colleagues (2000) found that women with a history of CSA reported more chronic pain and greater use of health care resources than nonabused women in their study. In this study of 80 women, CSA victims experienced more hospitalizations and visited their family physician more than the nonabused group. Of particular interest are findings that women who were victims of CSA experienced a greater number of surgeries than those who were not abused as children (controls). Types of surgeries were not identified. Further examination included a study of invasive versus noninvasive medical procedures. Although not statistically significant, invasive procedures such as endoscopy and laparoscopy were experienced in greater numbers by women who had experienced CSA than those in the nonabused sample.

Mullen, Martin, Anderson, Romans, and Herbison (1996) surveyed adult women (n=1,376) to ascertain a history of physical, sexual, or emotional abuse as children. Women under the age of 65 years who had indicated an abuse history (CSA, physical, or emotional abuse as children, or any combination) prior to the age of 16 years (n=107) were further interviewed by the researchers as were 390 nonabused respondents who represented the control group. The purpose of the study was to examine more closely the relationship of a history of abuse to women's mental health and social, interpersonal, and sexual functioning as adults.

The researchers found that women who acknowledged CSA or physical abuse in childhood had significantly poorer mental health than those in the nonabused and emotionally abused only group. Those women who acknowledged CSA, physical abuse, or emotional abuse as children were more likely to have histories of eating disorders and depression than those in the

nonabused group. History of CSA, physical abuse or emotional abuse in childhood was also associated with poor self esteem as an adult. A history of multiple types of victimization tended to increase negative outcomes, but not always significantly.

Generally, women in this study who had experienced any type of maltreatment as children were more likely to have problems with mental health, especially depressive and anxiety-related symptoms as well as interpersonal and sexual difficulties as adults. Although negative physical consequences as adults were not measured in this study, findings do support an association between a history of childhood maltreatment and increased vulnerability to a range of mental health, personal, and social problems as adults.

Lifetime violence history and health-related quality of life were measured in an examination of women's victimization experience while serving in the military (Sadler, Booth, Nielson, & Doebbeling, 2000). Although in the Sadler et al. (2000) study violence experienced as an adult referred to assault or rape perpetrated by someone other than an intimate partner, the health-related findings are relevant to this current study and provide support to the recognition of violence against women as a public health concern.

Of the 537 women interviewed, almost half experienced physical or sexual violence during their military service. Before commencement of military service, 47% of the participants had experience some form of sexual abuse during childhood. One quarter of the participants were sexually victimized during childhood and were not further victimized as adults.

In this study, women who were physically or sexually assaulted at some point in their life reported significantly lower health-related quality of life than those who had not been victimized. Women raped during military service had significantly poorer health and impaired quality of life than non-victimized women. More than ten years after their military service, women with

histories of physical and sexual violence during their service were more likely to report poorer health status than those without such histories. Findings support the severity and chronicity of the consequences of having been a victim of physical and sexual assault.

Surgical Consequences

Over 25 years ago, research geared toward battered women and the surgical experience appeared in the literature. Rounsaville and Weissman (1978) had already recognized battering as a serious public health issue when they studied women admitted to the surgical and psychiatric services of an acute care teaching hospital emergency department. They hoped to increase the awareness of the effect of IPV on women's health and to identify the importance of the role of the physician in identification of and intervention for battered women who present in these health care settings.

In a one month period, 37 women – 33 from surgical services – were identified as “battered.” These 33 women, who represented 3.8% of women presenting in surgical services, had physical evidence of being abused at least once by an intimate male partner. Women who had experienced emotional abuse without physical abuse were not included in the study. Injuries to women, whose demographic information cut across all ethnic, age, and social groups, included trauma to the head, fractures, lacerations, contusions, and soft tissue injuries. Previous hospitalizations of some of the women included those due to spinal fractures, severe facial injuries, knife wounds, and intra-abdominal injury. Other previous injuries to the chest and abdomen were also documented.

Interviews with some of the women revealed willingness on their part to share a history of or presence of IPV in their lives with emergency department physicians when directly asked about it. The authors agreed that physicians who offer primary care services will probably have

interactions with battered women in their practice. They also recommend that primary care practitioners should be prepared to identify these women so as to offer appropriate intervention and referral.

The focus of this study was on secondary prevention rather than primary, therefore, physical indicators were utilized as identifiers. Universal screening was not addressed or examined. However, this study was one of the first in the literature that looked at identification in health care settings by health care providers and specifically identifies battering as a surgical health care issue.

Hastings and Kaufman Kantor (2003) built on the Kendall-Tackett, Marshall and Ness (1999) study by considering the relevance of past childhood maltreatment, and/or IPV in adulthood to women's current health status, number, and types of surgeries. They conducted a secondary analysis of intake data of 130 patients drawn from a primary care practice in northern New England. Sixty-five clients self identified as survivors of abuse, either as children or adults. This included 56 adult women and 9 adult men ranging in age from 18 to 88. The remaining 65 clients did not disclose survival of abuse and represented the control group, which was matched for age and gender with the abused group sample.

The researchers examined both the individual and the cumulative effects of childhood and adult victimization on physical and psychological symptoms. In addition, they examined the extent to which victimization histories are associated with quantity and particular categories of surgical intervention. Because the authors believed that the health issues of women and men, as well as the utilization of health services, may be quite different, only data reported by female clients were included in the analysis. Thus, the findings from the study reflect data from women only in the victimized as well as in the comparison, non-victimized group.

The findings showed that women who had experienced either child maltreatment or IPV underwent surgery more often than those women who had no history of victimization. Women who had experienced both IPV and child maltreatment had more hospitalizations than women who had not experienced victimization, or IPV or child maltreatment only; however, statistical significance was not found.

Women who had not experienced abuse visited physicians less often than women who had survived child maltreatment, IPV, or both but the differences were not significantly different. Women who experienced either IPV or IPV and child maltreatment over the life course were significantly more likely to report a greater number of illness related symptoms than those who had experienced no abuse.

Women who identified as survivors of victimization, either as children or adults, were significantly more likely to have undergone any surgery than those who had not experienced abuse. In addition, battered women were significantly more likely to have experienced major surgery than those who had not experienced abuse. In fact, women who had experienced IPV in adulthood were twice as likely to undergo major surgery as women who identified no abuse. Specifically, the presence of victimization history appeared to include significantly more major surgical interventions, especially surgery of an exploratory nature.

These findings were consistent with the stress-illness perspective used to frame the analysis, as well as previous research demonstrating relationships between women's victimization and health impairment. Comparisons of women, who have experienced victimization either as a child, as an adult, or both, support the theory that increased stress due to a history of victimization over the life course may result in increased numbers of negative health effects.

Limitations to this study include the small sample size and homogeneity of the sample. Additionally, the tool used to elicit client information was designed for use in collecting medical histories and was not intended as a research instrument. Thus, only two questions were used to ask about presence of victimization. Furthermore, in collecting the information about victimization, the term “abuse” was used rather than a description of specific acts or experiences. The term has various meanings for different people.

Finally, the type of abuse was not defined in the study. Although child maltreatment, IPV as an adult, and history of childhood maltreatment and IPV were studied, the nature of the abuse (sexual, physical, and/or emotional) was not identified, nor was the frequency or severity of the abuse addressed. Given the importance of victimization to women’s health status, and the somewhat limited information on the relevance of victimization to surgical intervention, the authors suggest that this is an area in which further examination is warranted.

Acute Inpatient Services

The presence or history of domestic violence was assessed in a study including 101 female patients admitted into acute care hospital settings (McKenzie, Burns, McCarthy, & Freund, 1998). Twenty-six women confirmed a history of domestic violence at some point in their lives. Interviews with the women revealed that some of their injuries had included contusions, stabbings, fractures, or were the result of forced sex. Although presence of IPV in the women’s lives was confirmed during the interview process, chart review of the current admission revealed no reference to the presence or history of domestic violence in their lives.

Further analysis of the data revealed that 45 women had been admitted to surgical services and nine of these women responded affirmatively to a history of IPV. Again, none of the women had been screened for history or presence of IPV at the time of admission to the hospital.

The authors encouraged physicians to learn more about the dynamics of IPV, and ask about its presence in the lives of all female patients.

Kernic, Wolf, and Holt (2000) in their study of female victims of IPV noted that women had increased numbers of hospital admissions in the year before filing a protective or restraining order than their nonabused counterparts. The increased relative risk for hospitalizations in the abused group included admissions as a result of injury, poisoning, sprains, strains, dislocations, intracranial trauma, open wounds of the head, neck, trunk, and upper limb, assault, contusions, and gastrointestinal disorders.

It is of particular interest that complications of surgical and medical care were greater in the abused group than in the nonabused group. Findings support the fact that IPV significantly affects women's health and women's utilization of inpatient health care services.

In 1999, the American College of Surgeons (ACS) Committee on Trauma issued a formal statement of its recognition that domestic/intimate partner violence is a major public health problem, and acknowledged that victims are frequently in need of surgical care. Surgeons, without an awareness of their patients' victimization status, regularly treat women who present for care with injuries ranging from minor lacerations to severe blunt and penetrating wounds. The ACS statement suggested that IPV be viewed as causally related to injuries. A practitioner who fails to diagnose IPV may be unsuccessful in the identification of a disease process that can be chronic.

Berrios and Grady (1991) reviewed data from 218 women who identified as victims of IPV at an emergency department in the San Francisco area. They found that over one-quarter of these victims were admitted to the hospital for their index injury, and that 13% required major surgical intervention. Because of the saliency and severity of the acute trauma experienced by

some victims of IPV, the studies looking at the linkage between surgery and victimization have been focused on victims appearing in health care settings for treatment of the more acute injury or problem.

Rose and Saunders (1986) noted the importance of the role of nurses in the identification and treatment of battered women, particularly in acute care settings such as emergency and surgery. In their survey of the beliefs and attitudes of 86 physicians and 145 nurses regarding domestic violence, the largest percentage of the respondents, who represented 11 specialty areas, were staff in the surgical specialty (n=59 or 25.5%). Recommendations were made regarding further training in identifying IPV for all health care providers, especially those in training programs.

Outpatient Settings

McCauley et al. (1995) interviewed 1,952 women who were clients in one of four community based primary care practices in an urban area in an effort to identify the presence or history of IPV and clinical symptoms associated with IPV. They found that over 400 of these women were survivors of abuse at some point in their adulthood, and over 400 had experienced violence as children (before the age of 18 years). Over 600 of the women acknowledged the abuse as either adults or children. Currently-abused clients had more evidence of physical symptoms, depression, anxiety, and suicide attempts, than those who had no ongoing abuse. In this study, however, no statistical significance was found between these two groups for likelihood of lifetime surgeries experienced.

Wukasch (1996) studied the impact that a history of rape and/or incest had on women who were recovering from a specific type of surgical intervention: elective hysterectomies. In this cross-sectional study, 92 women were interviewed at four established times in the post-

surgical period, each several months apart. The results showed a significantly higher level of depression in the first year after hysterectomy among women with a sexual assault history compared to non-victimized women.

Wukasch suggested that undergoing a hysterectomy could serve as a trigger to past traumatic memories of abuse. Depression might result when the victim is forced to deal not only with the surgical experience, but with the renewed memory of the abuse as well. Past abuse does seem to leave people more vulnerable to depression and other forms of hyperarousal, which might further explain these findings. Unfortunately, the presence of ongoing IPV was not assessed by the author.

Studies of women seeking care from gastroenterology services also point to a link between victimization histories and current illness. In their study of 206 women seeking care in a gastroenterology practice, Drossman et al. (1990) found that female patients who had experienced victimization as either an adult or child (n=89) had more surgery over the course of a lifetime than did the patients who had not experienced abuse (mean = 2.8 surgeries in the abused group, compared with 2.0 in the nonabused group). Among female patients seen for medical problems, a history of abuse was associated with more pelvic and abdominal pain and more surgeries over their lifetimes.

Similarly, Leserman et al. (1996), in their interviews with 239 women seeking care at a gastroenterology clinic, found that a history of physical or sexual abuse in women was strongly related to health status. Abuse was defined as sexual (attempted, touched, raped) and physical (beaten, life threatened). Abused women, representing 66.5% of the sample, experienced poorer health, more pain, more non-GI somatic symptoms, more lifetime surgeries, more psychological distress and worse functional disability than nonabused women. Women with rape histories

(defined as vaginal or anal intercourse) experienced nearly two times more surgeries than women without histories of sexual abuse. No further information was presented regarding types or numbers of surgery over the life course. Findings of this study indicate that assessment of abuse should be an essential component of medical histories.

Walker et al. (1999) found significant results in their study of the relationship between abuse in childhood and negative health outcomes as adults. Self-reporting female subjects (n=1225) were randomly selected from an HMO in the northwestern part of the country. A history of abuse and neglect during childhood was acknowledged by nearly half of the women (43%). History of childhood maltreatment was significantly associated with the following adverse physical health outcomes experienced as adults: perceived fair to poor overall health, greater physical and emotional functional disability, and increased number of distressing physical symptoms.

The number of types of maltreatment experienced was significantly correlated with the number of physical symptoms that were identified, diagnoses identified by physicians, increased functional disability, and health risks. Some of the physical symptoms examined include nausea, diarrhea, constipation, fatigue, insomnia, abdominal pain, back pain, and chest pain. The authors suggest that knowledge of a possible connection between history of childhood maltreatment and poorer health status during adulthood should be taken into consideration when caring for women who may have survived such treatment as children.

D. Summary

Review of the current body of literature reveals that health care professionals, researchers, and others have long studied the effects of child maltreatment or IPV on women's

general health and health care. As early as 1978, researchers were reporting findings suggesting that battered women would share their personal histories of IPV if directly asked about its presence in their lives. Unfortunately, reports from most recent research acknowledge that presence or history of intimate personal violence is still not being assessed in many health care settings. This represents an ongoing gap in health care for women. Despite increasing evidence to support screening and assessment for IPV in health care settings, this practice remains limited in clinical settings across the United States.

To date, the IPV research agenda has focused on the specific health problems that may result from the presence or history of IPV. It has been noted that IPV is a direct cause of physical injury and that a wide range of illnesses of a more chronic nature are associated with history of victimization. In addition, some women who experience either acute and/or chronic illnesses as a result of the presence of IPV require surgical intervention.

Studies that together portray a linkage between women's history of victimization, health status and need for surgery are a result of the information that has been gathered from nurses, physicians and others, but perhaps most importantly, from women who have been victims or recipients of such behavior and survived. Many of the studies have included insights shared by women who have recounted their personal stories of a lived experience in intimate relationships marred by violence. The stories of victimization and interaction with health care providers are shared as seen through the eyes of the women, often in their own words, and often detailing how the experience was perceived by them.

The current body of literature boasts a wide variety of research designs from small studies including those that were designed to offer information of a more qualitative nature to very large, multi-site projects. Similarly, sample sizes range from very small pilot studies to

research that includes nearly 2,000 subjects. Studies have taken place in a variety of urban and rural health care environments and include acute care, inpatient, outpatient, primary care, clinic, and community based settings. A common finding of the studies is the significance of the relationship between women with a history of victimization and the negative health outcomes they experience.

Gaps in the literature include the absence of any examination of the numbers and types of surgical intervention that battered women have experienced when compared to non-abused women. Specifically:

1. Cumulative effects of abuse – child maltreatment, IPV experienced as an adult, or a combination of child maltreatment and IPV– related to numbers and types of surgical intervention over the life course.
2. An examination of the pre-operative (state) and trait anxiety experienced by women who are victims of child maltreatment and/or IPV to pre-operative (state) and trait anxiety experienced by non-abused women.

Inquiry designed to encourage participants' sharing of the lived perioperative experience and what that experience was like for them is also needed. The collection and analysis of data of a more qualitative nature will add to perioperative nursing knowledge. A study designed to investigate the benefits of more comprehensive assessment and intervention on the part of perioperative nurses, including screening, assessing, and intervening on behalf of victims of abuse, would provide additional data that is currently lacking.

III. METHODS

A. Design

Overview

This chapter provides a discussion of the methods and design of the research related to the present study. Specifically, the discussion encompasses the topics of design, instruments, subjects, subject selection, data collection, ethical considerations, data coding, and analysis for the study. This triangulated study includes both quantitative and qualitative research approaches. It was felt that the use of both methods would provide a more comprehensive understanding of the relationship between women's health, history of victimization, and surgical interventions, especially the subjective lived experience of women and their responses to the experience.

Using a quantitative approach, I conducted a cross-sectional, descriptive study with 156 women utilizing perioperative services. Data collection took place between April and October of 2005. The hypothesized relationships that were investigated focus on the association between victimization history and the occurrence of surgical interventions over the life course, and the relationship between state (i.e., pre-operative) and trait anxiety and victimization history.

The purpose of the qualitative approach was to describe the perceived experiences of women who were experiencing IPV in their current relationship and who had been recent patients in perioperative services. The goal was to elicit their recommendations for improvements in perioperative nursing care. It is my belief that the combination of quantitative and qualitative methods will provide richer data that will ultimately enhance nursing knowledge.

The research and the hypotheses that were tested were intended to remedy gaps in research and practice related to assessment of the relevance and effects of child maltreatment or

IPV on the general health and health care of women. The review of the literature also supported the need to increase and improve screening for the presence or history of personal violence in health care settings. Despite increasing evidence to support screening and assessment for IPV in health care settings, this practice remains limited in clinical settings across the United States.

Based on the review of the literature, the following relationships are hypothesized and were tested in the study:

1. Adult women who have suffered victimization during their lifespan – either child maltreatment, IPV as an adult, or both – are more likely to undergo surgical intervention than adult women who have no history of child maltreatment or IPV.
2. Adult women who have suffered child maltreatment, IPV as an adult, or both – experience higher levels of pre-operative (state) and trait anxiety, as measured by the STAI, than adult women who have no history of child maltreatment or IPV.

Additionally, the following exploratory questions were examined:

1. Are adult women who are victims of child maltreatment, IPV as an adult, or both – more likely to undergo specific types of surgical intervention than adult women who have never experienced child maltreatment or IPV?
2. How do adult women who are experiencing IPV in their current relationship describe their recent experience as a client in perioperative services?
3. What nursing interventions do adult women who are experiencing IPV in their current relationship suggest as strategies to enhance the care provided to them by perioperative nurses?

Dependent and Independent Variables

The dependent variables in the study are:

1. numbers and types of surgical intervention over the life course
2. levels of state (pre-operative) and trait anxiety, as measured by the State-Trait Anxiety Inventory (STAI).

The independent variables are:

1. history of victimization over the life course as measured by an index of child maltreatment.
2. history of experiencing intimate partner violence, as measured by the Revised Conflict Tactics Scale (CTS2).

B. Sample

Setting

The sample population was drawn from an academic medical center and tertiary care trauma center that includes a 429-bed non-profit tertiary care hospital. The medical center serves a large rural area, and approximately a quarter of a million people in upper New England.

Demographics of Setting and Sample

Approximately 30,000 patients receive care in perioperative services annually and over 350,000 patients are seen annually in the clinic setting. According to Census data (U.S. Census Bureau, 2000) for the communities from which the Medical Center draws its patients, women represent 50% of the total population of the area served by the tertiary care center. The 2002 population of adults aged 18-65 included a total of 243,151 residents: 122,782 adult females. The numbers of female patients treated at the tertiary care center represented 53.3% of the total

patient visits. Approximately 83% of the total visits represented male and female patients 18 years of age and over. Adults over 65 years of age represented 31.8% of the population and middle aged adults represented 50.4% of the population.

In the recent survey of demographic characteristics (2002), the average income of the population as a whole in the geographic area served by the tertiary care center was \$21,750 per capita. In some of the most rural towns, the average income decreased to as low as \$16,000 annually.

The majority of the residents aged 18 - 65 residing in the area served by the medical center was identified as Caucasian. Of those 243,151 residents, only 7,209 residents between the ages of 18 and 65 identified as non-white. This represents 3% of the total population served by the tertiary care center and includes African American, American Indian and Alaskan Native, Asian, and Hispanic or Latino residents.

The primary language of the majority (97%) of the area residents is English. A small number of residents speak a language other than English at home. Spanish is the most common language next to English. Other Indo-European and Asian and Pacific Island languages are also primary languages for some area residents but these individuals are much smaller in number.

In calendar year 2002, general surgical cases (i.e., cholecystectomies, hernia repairs, and bowel resections) were the most commonly performed procedures in the operating room suite. The next most commonly performed surgeries were in the orthopedics service.

Eligibility. Women were asked to participate in the study if they met the following criteria: they were between the ages of 18 and 65, were scheduled for elective surgery, able to speak, read and understand English and were not in acute distress. All patients had been informed in the individual surgical clinic setting of the necessity for surgical intervention.

Sample Composition

In this study, post-hoc classification of the study participants placed each participant into one of four groups depending on their responses during the interview. Based on a review of the literature on women's victimization history, study hypotheses, and selected measures, the composition of the groups is as follows:

1. Group A includes women who received a positive score on the child maltreatment index (CMI), a tool that measures personal history of child maltreatment. Women who responded with "yes" to any item in question "1" or who acknowledged witnessing violence more than "2" times (question "2") were viewed as having a history of maltreatment as a child. Women in this group experienced child maltreatment *only*: history of IPV (i.e., scores on the CTS2) was negative.
2. Group B is composed of women who have identified a history of IPV as an adult *only* as measured by positive responses on the following CTS2 subscales:
 - (a) psychological aggression scale as measured by the four items on the "severe" subscale which address demeaning insults, destruction of personal property, insults about sexual attraction, and threats to assault;
 - (b) physical assault scale as measured by any of the five items in the "minor" scale (throwing object at, twisting, pushing, shoving, slapping) or the seven items in the "severe" scale (use of weapons, punching, choking, slamming, beating, burning, or kicking);
 - (c) sexual coercion scale as measured by any of the three items on the "minor" scale (forced sex [including oral or anal sex] without physical force or without

condom use), or the four items on the “severe” scale (forced sex [including oral and anal sex] with use of threats or physical force);

(d) injury scale as measured by either of the two items on the “minor” subscale (sprain, bruise, cut or physical pain due to fight with partner) or any of the four items on the “severe” subscale including loss of consciousness, broken bone, doctor visit [or unmet need for doctor visit] as a result of fight with partner.

3. Group C consists of women who received positive scores for history of both child maltreatment and IPV as an adult (as identified in numbers “1” and “2” above).
4. Group D consists of women who have no history of any experience of child maltreatment or IPV (as defined above).

Power Analysis

According to Borenstein, Rothstein, and Cohen (2001), a power analysis is used to anticipate the likelihood that the study will yield a significant effect. An a priori power analysis was conducted using ‘*Power and Precision*’ software (Borenstein et al., 2001). Given that power calculations will vary depending on the type of statistical analyses implemented, calculations are presented for two types of anticipated analyses: cross tabulation (cross tab) and the analysis of variance (ANOVA). The statistics on which the power analyses were based are drawn from the Hastings and Kaufman Kantor study (2003).

Power 1. A cross tabulation contains the joint distribution of two variables (Newton & Rudestam, 1999). Cross tabulation was used to test the null hypotheses that the proportion of cases falling into each group (or column) is identical for all rows in the study. A 4x2 cross tab design included the four victimization groups and anxiety (the outcome) which was

dichotomized. The significance level (alpha) was set at .05 and a two-tailed test was assumed. Using a sample size of 230, an effect of 80% power was calculated. There is an 80% chance that this test would yield a statistically significant result.

Power 2. A one-way analysis of variance (ANOVA) was used to compare the means in more than two groups (Borenstein et al., 2001). Again, drawing from the calculations presented in the Hastings and Kaufman Kantor study (2003), the mean and standard deviation for each of the four victimization groups and the data on the mean numbers of major surgery were calculated. Assuming a sample size of 152 (38 cases per cell), an alpha of .05, a two-tailed test, and an effect size of .27 to produce a medium effect, a power of 81% was calculated. Using a sample size of 152, there would be sufficient power to show a medium effect. (See Appendix F.)

Recruitment of Sample

After the necessity for surgical intervention has been acknowledged by the surgeon and agreed upon by the patient, the patient is typically directed to the office of the surgical scheduler in the clinic. For this study, during the meeting with one of the surgical schedulers (all of whom are women) in the general surgery, gynecology, or orthopedic clinic, and before leaving the surgical scheduler's office, the patient was to be asked by the surgical scheduler if she would be interested in learning more about and possibly participating in a study that includes women who are scheduled for elective surgery. A study information sheet was given to the client for review. (See Appendix H.) Prior to their involvement in patient enrollment, I met with each of the surgical schedulers to introduce the study and to discuss my related request of them. I reviewed with them the criteria for subject participation to be sure they were clear on which pre operative patients should be asked about the study

Initially, patients were considered eligible for the study if they were adult women scheduled for elective surgery through one of the following surgical clinics: general, orthopedic, or gynecological surgery. Subject recruitment in these areas proved to be extremely slow. Permission was obtained to add three additional clinics to the recruitment effort: the plastics, oral, and otolaryngology (ENT) clinics.

Because the numbers of women who were actually being asked by schedulers about their interest in the study remained small (due to time constraints according to the schedulers) and the small number of women actually interviewed, permission was granted by the IRB to include the Pre-Admission Testing area (PAT) as another point of entry into the study to increase enrollment of subjects. Although all patients in PAT have already been scheduled for surgery, many had not been asked about their interest in participating during the time when they were booked for surgery in the individual clinic setting.

In PAT, the question was posed to potential participants by one of seven staff nurses assigned to that clinical area. Prior to their involvement in patient enrollment, I met with staff members in PAT to introduce the study and my related request of them. I reviewed with staff the criteria for subject participation to be sure they were clear on which pre operative patients should be asked about the study. All of the staff nurses in PAT are well seasoned in interacting with patients who are scheduled for surgery. Their primary role is working with clients who are referred for pre-operative assessment (history and physical) which may include lab work, x-ray, electrocardiography, and pre-operative teaching.

Using a purposive sampling strategy, women between the ages of 18 and 65 who were scheduled for elective surgery were asked to participate in the study. To be included, the participant met the following criteria: they were able to speak, read, and understand English and

were not in acute distress. All patients had been informed in the individual surgical clinic setting of the necessity for surgical intervention.

Prior to contacting the researcher, the scheduler or nurse was asked to determine that the patient indeed met the baseline study inclusion. The schedulers and nurses were provided with a reference sheet which included basic information about the study and the volunteer nature of the study. (See Appendix G.) With patient approval, the surgical scheduler or nurse was asked to contact the researcher while the patient was still in the scheduling office. The scheduler was instructed to emphasize to potential participants that involvement in the study was of a completely voluntary nature and that the decision to participate or not participate in the study would have no effect on the health care the woman would receive.

Initially, the researcher, upon receipt of the contact information, planned to either meet with the patient in the scheduler's office (following the call from the scheduler that a patient was interested in learning more about the study) or telephone the potential participant at the time she had indicated to the scheduler as appropriate. If the patient preferred to receive the information at a later time via telephone, the surgical scheduler obtained their name, telephone number, and the best time to call. Contact information was maintained on a separate sheet of paper and was filed in the clinic until it was collected by the researcher. The researcher collected the contact information during regularly scheduled visits to the clinics during the week and subsequently filed the information in a locked file cabinet. (See Appendix D.)

Again, due to an unwillingness on the part of potential participants (due to time constraints as perceived by the surgical schedulers) to meet face to face with the researcher, permission was granted by the IRB to obtain informed consent over the telephone. The interview took place via the telephone either at the time of the call, or at a time that was more convenient

and agreeable to the patient. If preferred, arrangements could be made to complete a face to face interview at a private location within the medical center; however, no subject chose the face to face option for the interview. Consent for the study took place over the telephone at a time that was mutually agreeable to the participant and the researcher.

Training of Study Recruitment Staff

I met with surgical schedulers in the designated clinics and nurses in the PAT unit and reviewed with them the following method for asking women to consider participation in the study. After explaining my status as a doctoral student and the requirement to conduct the study prior to my successful completion of the program, I requested that surgical schedulers ask pre-surgical female patients aged 18 to 65 if they would like to learn more about and possibly participate in a study of women who are scheduled for elective surgery. The surgical schedulers and nurses were given a standardized script that included basic information about the study (See Appendix G.). I chose not to mention that the study was focused on victimization history in order to eliminate difficult or uncomfortable questions related to abuse that might be directed to the surgical schedulers. This content was addressed as part of the informed consent process and was completed by me prior to the start of the participant interview.

If a patient acknowledged an interest in participating in the study, the staff person was asked to offer two options to the patient. She could offer to contact the researcher, who would come directly to the clinic, introduce herself to the patient, and escort her to a private location, where additional information about the study would be shared. A second option was for the scheduler to obtain the patient's name, telephone number, and the best time to call. This information would then be given to the researcher who would call the patient at the designated

time. The scheduler or nurse was instructed to keep this contact information in a designated file until it was collected by the researcher.

Staff was assured that they were obtaining permission only for the researcher to make initial contact with the patient; they were not obtaining consent for study participation, nor were they expected to answer detailed questions about the study. Upon receiving the contact information, the researcher was permitted to either meet with the patient following her meeting with the surgical scheduler or contact the patient at the designated time and phone number. In this study, participants chose to complete all interaction with the researcher – information about the study, informed consent, and interview process – via the telephone.

The telephone contact with potential participants began with a description of the study by the researcher. After reviewing the consent form and answering any questions or addressing any issues the patient might have, verbal consent via the telephone was obtained from the patient before any data collection was begun.

After consenting, the participant was given the option of continuing with the interview at that time or if preferable, she could arrange for the researcher to contact her at a time and phone number that was more convenient (or safe) for her. If a patient chose to not participate in the study, the contact information received regarding the patient was destroyed.

C. Procedures for Data Collection

During recruitment, the designated staff were instructed to inform potential subjects that participation in the study is completely voluntary and would involve an approximately 45 minute interview. (The actual interview time in most cases was less than 30 minutes.) Patients were assured that their decision to participate in the study or not, would have no effect on the health

care they receive. Patients were also told that they could withdraw from the study at any time and that any information collected to that point would be destroyed.

Review of the consent form took place with the patient prior to the collection of data. The patient was asked to provide verbal informed consent for the interview which was so noted by the researcher. The researcher then asked the participant for permission to make one follow-up contact phone call (pending results of the initial interview). The voluntary nature of the study was reinforced.

All data collection was conducted by the researcher. The researcher introduced herself and named the academic institution through which she was affiliated. The affiliation the researcher has with the medical center was also shared with the participant. Any questions or concerns that the participant had about the study were addressed prior to the start of the interview. Once verbal permission was obtained, data collection began.

Limits to Confidentiality

As a nurse in the state of New Hampshire, I am a legally mandated reporter which means that I am required by law to report any suspicion of neglect or abuse of a child (NH Child Protection Act, 1979). I explained the reporting requirement prior to conducting the interview. This was addressed as follows. “In the unlikely event that you report to me that your child is at risk for immediate harm, then I might have to talk with an appropriate state agency to see if there is any need to protect your child.”

Throughout the interview I remained empathetic, nonjudgmental, and supportive with each woman. As appropriate to the comments made by the respondent, this researcher emphasized that no one deserves to be treated in such a manner when IPV or child maltreatment history is identified. Although options may have been offered in the debriefing following the

interview, the researcher, at no point in the interview process, told a woman what choices to make or attempted to give advice regarding what steps to take in a given situation.

Debriefing

If women responded that they have had or are currently experiencing IPV in their relationship, they were offered and provided referral information to the local crisis center, if they so desired. Safety planning was done prior to the end of the interview. If, when talking about a previous traumatizing experience, a woman acknowledged a need for professional counseling or further debriefing, the researcher did have access to support offered through the on-call psychiatric services at the Medical Center. There is general agreement by researchers that it is entirely appropriate to provide intervention during a research study (Lutz, 1999; Parker & Ulrich, 1990). Participants were reminded that at any point during the interview they should feel free to terminate the session completely or move to the next question.

D. Measures

Demographics

Demographic information on the participants was obtained via a checklist and was completed with all participants in the study. Included in the demographics were the following: age, race/ethnicity, marital status (single, cohabitating but not married, married, living apart or separated, divorced, widowed), number and ages of children, education, and income level.

Health

Additional descriptive information was collected on general and perceived health status and past year health service utilization. Perceived health status was examined through use of the following questions which have been used in large numbers of studies and have shown high

reliability and construct validity (G. Kaufman Kantor, personal communication, September 23, 2003). Participants were first asked, “Compared to other women your age, how would you rate your general health?” Respondents were asked to choose from the following options: excellent, very good, good, fair, or poor. Next, women were asked, “Overall, how many times did you see a health care provider about your own health in the past year (not including pre-natal or pregnancy related care)?” Possible participant responses included *never, once, twice, three or four times, or five or more times.*

The third question in this series addressed hospitalizations and was as follows: “In the past year, have you been hospitalized for any condition other than pregnancy or childbirth?” A “yes” or “no” response was required. If the participant answered “yes,” they were asked the reason for the hospitalization.

Screening, Prior Surgeries, and Previous IPV

Women were specifically asked about previous screening for IPV. Data on earlier surgical interventions were collected on all participants in the study and included numbers and types of surgery, and when the surgery was performed (years or age at time of surgery).

Participants were asked if they had been screened for IPV at any point during their last surgical experience, when that was, and the type of setting in which they were screened or the previous site of screening. They were asked to choose a response that best described their feelings about that screening. They were then asked if they had *ever* been screened for IPV during interactions with a health care provider and if so, when and where the screening occurred.

Finally, they were asked if they had ever experienced physical IPV in any of their intimate relationships. Women were asked, “Did a partner *ever* beat, push, hit, slap, punch, or cut or do anything like that to you?” If they responded in the affirmative, the respondents were asked

in how many relationships that had occurred, and what the most serious act was that ever occurred. (See Appendix A., Section A.)

Victimization History

Victimization history (child maltreatment, IPV, both child maltreatment and IPV or neither child maltreatment nor IPV) was measured by the established and reliable instruments that follow.

Revised Conflict Tactics Scale (CTS2). The Conflict Tactics Scale (CTS) developed by Straus (1979) is a well-known, well-studied, and frequently utilized instrument that has been widely used to measure psychological and physical acts perpetrated against an intimate partner. It measures the extent to which specific events such as acts of physical violence have occurred.

The CTS has been incorporated in studies around the world in populations that represent many diverse ethnicities and cultures and has well-documented validity and reliability. It has been conducted during face-to-face (person to person) as well as through telephone interview methods.

Straus, Hamby, Boney-McCoy, and Sugarman (1996) developed a revision of the CTS referred to as the Revised Conflict Tactics Scale (CTS2). Included in the CTS2 are scales that measure the following five constructs in the context of relationships between intimate partners: negotiation, psychological aggression, physical assault, sexual coercion, and physical injury. In comparing the CTS2 to the CTS, the revised instrument includes an accommodation for greater distinction between minor and more severe acts of aggression as well as injuries sustained from assaults. An additional feature in the CTS2 is that items measuring specific constructs are scattered throughout the instrument as opposed to being grouped together with like constructs and placed in hierarchal order as in the CTS. According to Straus et al. (1996), when items are

not grouped or placed in hierarchical order, respondents tend to think in greater depth about each item.

It is recommended that when appropriate, the items in the CTS2 be asked in the form of pairs of questions (e.g. participant actions and partner actions). Because perpetrators were not studied, only women and their victimization history were examined in this study. Data were obtained on the behavior of the intimate partner in the relationship as seen or experienced by the participants in this study. Previous studies in which both partners have been examined have found similar responses (Straus et al., 1996). (See Appendix A. Section B.)

Validity and reliability. Evidence of validity and reliability of the CTS is well-documented. Straus et al. (1996) have noted that researchers may hesitate to use a newer measurement that is not as well tested; however, preliminary evidence of construct validity has been documented and reliability of the revised instrument ranges from .79 - .95 (Straus et al., 1996). According to Straus, the validity that is widely recognized in the CTS may apply to this revised version of the instrument. However, validity and reliability may vary across subscales.

Psychological aggression. Psychological aggression has been revised from the CTS and includes eight items: four defined as “minor” and four as “severe” such as the following: “My partner insulted or swore at me” (“minor”) and “My partner called me fat or ugly” (“severe”). Originally, the construct was identified as verbal aggression but was revised in the CTS2 to acknowledge and include instances of nonverbal, yet aggressive acts. In this study, only the four items on the “severe” subscale were used to determine psychological aggression. A positive response to any of those four items was considered a positive history of psychological aggression.

Physical assault. Physical assault, originally described as physical violence, was measured with 12 items to more clearly describe the specific action taking place. The subscales include five actions that are considered “minor” and seven actions which are “severe.” Examples include “My partner pushed or shoved me” (“minor”) and “My partner beat me up” (“severe”). A positive response to any of the 12 items was considered a positive history of physical assault.

Sexual coercion. Sexual coercion, measured with a seven-item scale (including three “minor” and four “severe” items) is defined by the use of coercive activities including those of a more verbal nature to actions that include physical force. “My partner made me have sex without a condom,” (“minor”) or “My partner used threats to make me have sex” (“severe”) are two examples from this subscale. A positive response to any of the seven items was considered a positive history of sexual coercion.

Physical injury. Measurement of physical injury includes six items (two from the “minor” subscale and four from the “severe” subscale) and is defined as an act in which bone or tissue damage is in evidence, a need for medical attention is identified, or pain that results from the injury continues for a day or more. “I had a sprain, bruise, or small cut because of a fight with my partner” (“minor”) and “I had a broken bone from a fight with my partner” (“severe”) are examples from this subscale. A positive response to any of the seven items was considered a positive history of physical injury.

Negotiation. Negotiation was not measured as it was not pertinent to the current investigation. Because the negotiation items were not included in this study and because questions were asked of women only and their possible experience as a victim, testing time for the CTS2 was estimated at no longer than ten minutes.

Response items. Response items are consistent across all questions and subscales.

Participants in the study chose from the following range of response options: “once in the past year,” “twice in the past year,” “3 – 5 times in the past year,” “6 – 10 times in the past year,” “11-20 times in the past year,” “more than 20 times in the past year,” “not in the past year, but it did happen before,” or “this has never happened.”

Child Maltreatment Index. The Childhood Victimization and Maltreatment Index (child maltreatment index or CMI) was used to measure a history of child maltreatment. Eight questions were asked of the participants to address a history of child maltreatment that occurred before the age of 18 years (0 – 17 years). Frequency of childhood maltreatment was not measured, with one exception. One question, which addressed a history of witnessing physical family violence, offered the following options: “not at all,” “1 or 2 times,” “3 – 9 times,” “10 – 25 times,” or “25 times or more.”

The questions have been used in a number of studies focused on child maltreatment and IPV issues and are known to have high construct validity (G. Kaufman Kantor, personal communication, February 2, 2003). They have been slightly modified to clarify the context of the relationship being examined (e. g. caretaker/parent). Responses to the remaining seven questions are in the form of “Yes” or “No” options, and if “Yes,” participants were asked at what age the event occurred.

In operationalizing the child maltreatment index, the following criteria were used. If the respondent answered “Yes” to at least one of the following (between the ages of 0 and 17), a history of child maltreatment was acknowledged:

1. Physically attacked by a stranger.
2. Physically attacked by a caretaker or parent.

3. Sexually assaulted by a stranger.
4. Sexually assaulted/molested by a caretaker or parent.
5. Involved in unwanted sexual contact with a caretaker or parent.
6. Physically abused by a caretaker/parent.
7. Emotionally abused by a caretaker/parent.

If the respondent acknowledged witnessing family violence more than one or two times, (e. g., Question 2) in this study, they were considered a victim of child maltreatment. (See Appendix A. Section D.)

State and Trait Anxiety

State and trait anxiety were measured with the State-Trait Anxiety Inventory (STAI). The STAI (Spielberger et al., 1983) is a 40-item questionnaire designed to assess symptoms of anxiety in adults. It provides separate measures of state anxiety (S-Anxiety scale or STAI Form Y-1) and trait anxiety (STAI T-Anxiety scale or STAI Form Y-2). All of the items are rated on a four-point scale. The entire instrument can be completed in approximately 10 minutes.

Most of the research on the STAI has been conducted with an earlier version of the instrument – Form X. However, correlations between Form X and Form Y are consistently high (Spielberger et al., 1983). The first 20 items measure state anxiety, which is defined as anxiety experienced at the current moment. In the current study, this referred to the pre-operative state of the patient. Participants were asked to rate how they felt at the moment during which the data was being collected. The range of possible responses included “not at all,” “somewhat,” “moderately so,” and “very much so.”

The final 20 items focus on how the participant feels in general, and measured trait anxiety. Trait anxiety is viewed as one’s tendency to be an anxious person. Responses to these

items include “almost never,” “sometimes,” “often,” or “almost always.” Individual scoring can be completed for both state and trait testing. Both components of the STAI have been used extensively in research as well as in clinical practice. In fact, they have been used to study anxiety levels in surgical patients.

Validity and reliability. This instrument has high test-retest reliability for trait anxiety (.73 - .86), but low reliability for state anxiety. According to Spielberger et al. (1983), low stability was “expected for the S- Anxiety scale because a valid measure of state anxiety should reflect the influence of unique situational factors that exists at the time of testing” (p. 31).

Measures of internal consistency are high and improvement has been noted in this newer version of the instrument (Form Y). Alpha Coefficients for the S-Anxiety scale is .92 and .90 for the T-Anxiety scale. Prior research provides evidence of the construct validity of both the S-Anxiety and T-Anxiety scales (Spielberger et al., 1983). The instrument has been used in thousands of studies and has been administered individually or in groups. (See Appendix A. Section C.)

Quantitative

Descriptive statistics were used to illustrate the sample population, screening history and frequency and types of surgery. Multivariate statistical analyses explored differences between and within groups. Data analyses were conducted using the Statistical Package for the Social Sciences (SPSS) PC 11.5. Subjects were assigned to one of four groups:

1. Group A includes women who acknowledged a personal history of child maltreatment only (as measured by the child maltreatment index).

2. Group B is composed of women who identified a history of IPV as an adult only as measured by scores on the following CTS2 subscales: psychological aggression, physical assault, sexual coercion, and injury.
3. Group C consists of women who acknowledged both a history of child maltreatment and who identified a history of IPV as an adult as measured by scores on the CTS2 subscales.
4. Group D consists of women who reported no history of child maltreatment (as measured by the CMI) or history of IPV (as measured by score on the subscales of the CTS2).

Data were also analyzed to explore the relationship between women's self perceived history of IPV as an adult ("In *any* of your intimate relationships, did a partner *ever* beat, push, hit, slap, punch, or cut or do anything like that to you?") and demographics, health characteristics, and screening history in health care settings. The groups are identified as Group E (women who when asked, acknowledged a history of physical IPV as an adult) and Group F (women who when asked, did not acknowledge a history of physical IPV as an adult).

Data were analyzed to test hypothesized relationships between victimization history (e.g., Groups A, B, C, and D described above) and the extent to which the type and degree of victimization is related to number and types of surgeries and degree of anxiety. The following hypotheses and associations between the independent variables were examined:

1. Women who have suffered victimization during their lifespan – either child maltreatment only, IPV as an adult only, or both child maltreatment and IPV – are more likely to undergo surgical intervention than adult women who have no history of child maltreatment or IPV.

2. Women who have suffered child maltreatment only, IPV as an adult only, or both child maltreatment and IPV – experience higher levels of pre-operative (state) and trait anxiety as measured by the STAI, than adult women who have no history of child maltreatment or IPV.

Groups A, B, C, and D (the independent variables outlined above) and the dependent variables: numbers and types of surgical intervention over the life course and levels of state (pre-operative) and trait anxiety, as measured by the State-Trait Anxiety Inventory (STAI) were explored using cross tabulations, and analysis of variance (ANOVA). T-tests were used to examine the mean differences between groups and the dependent variables. Cross tabulations using a chi-square test for significance testing of associations between variables were also conducted. Demographic data were analyzed descriptively and included as covariates (e.g., age, socioeconomic status) in some analyses.

Qualitative Analysis

Participants who acknowledged current IPV during the pre-operative interviews (n=8) were asked for permission to contact them one time postoperatively within two weeks of their surgery. Responses to the post-operative telephone interviews that addressed recent personal experiences in perioperative services (“How would you describe your experience as a client in perioperative services?”) have been outlined in narrative form using direct quotations when possible. Main themes or commonalities were identified. The goal was to share the essence of the experiences of the women.

Similarly, suggestions for improvement of nursing care offered by the participants in response to the specific question (“Can you suggest ways that nursing care in perioperative services might be improved to better meet your needs?”) have been outlined and directly quoted

or summarized using common themes. At all times, confidentiality and protection of privacy was maintained. (See Appendix A. Section E.)

E. Procedures for Protection of Human Subjects

Prior to data collection, approval by the institutional review board (IRB) was obtained from Dartmouth Hitchcock Medical Center (DHMC) as well as from Duquesne University where the researcher was a doctoral student. A means of contacting the researcher that was agreed upon by the researcher and participant as well as permission to complete one postoperative interview was discussed prior to the commencement of the interview.

A researcher is responsible for ensuring the participants' safety when conducting research with victims of abuse (Lutz, 1999; Parker & Ulrich, 1990). Violence directed toward a woman by the perpetrator of her IPV is an ever-present concern and must be addressed in careful detail prior to studying such a vulnerable population.

Parker and Ulrich (1990) have outlined specific issues that must be addressed in conducting research with women who are in relationships in which IPV occurs. For example, it is standard procedure to give research participants copies of consent forms prior to their participation in a study. It is also necessary for a participant to have the ability to contact the researcher should she so desire. This may be problematic for women who are in relationships in which IPV is occurring. The discovery of such a form or knowledge of a woman's participation in such research could place her in danger of additional personal violence from her partner. This researcher respected the decisions of the participant regarding issues related to study participation.

Subjects were assured that the investigator would maintain the confidentiality and anonymity of all data except that which is required by law to report (knowledge of current or ongoing child maltreatment). This researcher did not have access to patients' clinical records. Subject contact information was given to the researcher only after designated staff had provided women with information about the study. ("The purpose [of the study] is...to learn more about women's health issues – particularly issues for women who are scheduled for surgery...") and the women indicated a willingness to learn more about it.

Details of the study were purposefully left vague at this point. The researcher, during the planning of the study, chose that the topic of victimization history would be introduced by her rather than the surgical scheduler or PAT nurse. If introduced by someone other than the researcher, there was great potential for discomfort on the part of the staff person asking about possible interest in study participation and also for the patient being asked about the study. More specific information about the content covered in the interview including issues related to conflict in the family or in a relationship with a partner were covered during the informed consent process completed by the researcher.

Assurance was given that any part of the interview could be terminated by the participant at any time. If the patient was in agreement to participate, contact between the researcher and the patient took place following the conclusion of the session with the surgical scheduler or nurse at a time and at a phone number that was designated by the patient.

In this study, all 156 subjects completed a telephone interview. At the conclusion of the interview, if a post surgery interview was not requested by the researcher, the participant's name and contact information were destroyed. In interviews where ongoing IPV was identified and permission to contact one time postoperatively was solicited, contact information (name,

telephone number, and best time to call) was obtained at the time of the initial interview. A linkage between the pre-operative interview and the post-operative interview was identified via the assigned code number. At the conclusion of the post-operative interview contact information was destroyed.

IV. RESULTS

A. Introduction

In this chapter, a description of the sample and results of the data collection and analysis are presented. The sample is first described with the demographic data that were collected at the beginning of each interview.

B. Description of the Sample

A minimum sample size of 152 subjects was determined by (a priori) power analysis. With an effect size (f) = 0.27, this sample size yields a power of 0.81. A total of 156 subjects were interviewed for this study. One hundred twenty eight participants (over 80%) stated that they had been scheduled for surgery and at the time of the interview, surgery had not yet occurred. These participants were coded as “pre-op.” The remaining 28 participants (nearly 20%) had undergone surgery within the past several days and were coded as “post-op.” Demographic information including age, ethnic background, marital status, number of children living with and apart from participant, household income level, and last year of school completed will be presented for the total number of subjects and then for individual groupings.

This chapter also contains information related to participants’ general health status including the number of times a health care provider was seen and if there had been any hospitalizations during the past year (other than those related to pregnancy or childbirth) as well as individual surgical history. Participant responses to questions regarding personal experiences with screening for IPV were reported. Women who acknowledged a personal history of physical IPV when asked during the interview process (Group E) were examined.

Description of All Participants (n=156)

The sample is comprised of predominately white women (n=151; 96.8%) which reflects the population of the area served by the Medical Center. In fact, only 3% of the residents of the area served by the hospital identify as African American, American Indian, Alaskan Native, Asian, Hispanic or Latino (Census 2002). Participants in the study identified as single (11.5%; n=18), living together but not married (9%; n=14), married (57.7%; n=90), married but living apart or separated (3.2%; n=5), divorced (11.5%; n=18) or widowed (7.1%; n=11).

Ages of subjects ranged from 18 through 65 with two exceptions: one participant was 66 years of age and another was 72. The interviews of the latter two women had already been completed when their age status was determined to be outside of the parameters in this study, so the information they shared was included in the overall analysis of the data. The grouping with the largest number of subjects was in the 41 – 50 years of age category (n=53; 34.4%). Table 1 includes a summary of age categories in the study.

Table 1.

Age Categories for All Subjects Combined (n=156)

Age	Frequency	%
18-30	14	9.1
31-40	19	12.3
41-50	53	34.4
51-60	45	29.2
61-75	23	14.9
Missing Data	2	1.3

Education. The largest category of participants included either high school graduates or women who had completed the General Educational Development (GED) exam; some had attended college but did not graduate (n=86; 55.1%). Only eight subjects (5.1%) had not

completed a minimum of a high school education. The nearly 40% remaining had completed degrees beyond high school (n= 62; 39.7%).

Children. Of subjects who did have children living with them (n=64), most women had either one (n=27; 17.3%) or two children (n=25; 16.0%) with them at home. The mean age of children living at home with a subject was 13.7 years. Of the 92 women who had children that were not living with them, 38 of them (24.4%) – the largest group – had two children. The mean age of children not living at home with a subject was 31.5 years.

Socioeconomic status. The highest number of subjects (n=62; 39.7%) indicated the income category of their household to be between \$50,000 and \$75,000 or over \$75,000 annually. Fifteen subjects (9.6%) did not know or chose not to share personal information related to income. In Table 2, the income level of the subjects is presented.

Table 2.

Income for All Subjects (n=156)

Income Category	Frequency	%
< 10K, 10-20K	28	17.9
20-35K, 35-50K	51	32.7
50-75K, >75K	62	39.7
Did not know/Would not share	15	9.6

Previous surgery. Most women in this study (n=144; 92.3%) had experienced some type of surgery prior to the surgery that was currently scheduled. Only 12 participants had never undergone any previous surgery. Participants had experienced a wide range of numbers of surgeries prior to this one (n =1 to 19). Nearly 20% (n=27; 18.8%) of women had undergone two surgeries in their lifetime. Thirty seven women (25.7%) had experienced 6 to 10 surgeries in

their lifetime. See Table 3 for the summary of numbers of surgery prior to the surgery just scheduled.

Table 3.

Number of Surgeries Before This One for All Subjects (n=156)

Number of Previous Surgeries	Frequency	%
0	12	7.7
1	15	10.4
2	27	18.8
3	20	13.9
4	17	11.8
5	17	11.8
6-10	37	25.7
11-19	11	7.6

General health. Over 70% of participants (n=115; 73.7%) confirmed that their general health was *excellent, very good, or good*. Forty one individuals (26.3%) viewed their health as either fair or poor. Nearly 86% (n=134; 85.9%) of participants saw a health care provider about their own health “three or four” or “five or more times” in the past year (not including prenatal or pregnancy related care). However, only 44 of the participants (28.2 %) were hospitalized during the previous year.

Screening. Appropriate screening for IPV in health care settings has been identified as one way to enhance protection and overall safety for battered women (Dienemann, Glass, & Hyman, 2005). Over half of the women in this study who had surgery prior to the currently scheduled operation had not been screened for IPV at the time of their previous surgery (n=79; 55.6%). Twenty-seven women however (19%), did not have a clear memory as to whether they had been screened or not. Of those participants who acknowledged being screened at the time of a previous surgery (n=36; 25.2%), 73% (n=27) thought this “was a good thing to do.” In fact,

only one woman (2.7%) stated that she didn't like it. Five women (13.5%) felt indifferent to the screening. The remaining respondents wondered if asking about history of abuse would produce honest answers.

Over 50% of the study participants (n=87) indicated that they had been screened at some point during their interaction within the health care system; however, 65 women (41.7%) stated that they had never been screened for IPV in any clinical setting. Only four women (2.6%) did not remember whether they had been screened for IPV.

C. Separation of Subjects into Groups

The following four groups (A, B, C and D) were created in an effort to more closely examine participants according to their history of victimization as children and as adults.

Group A

Group A is comprised of women who experienced maltreatment as children only. Women in this group scored positively on the Child Maltreatment Index (CMI) *only* and had no history of IPV as an adult. While 29 women (18.6%) scored positively for child maltreatment only, a total of 90 women in the study (57.7%) scored positively for child maltreatment and IPV. Scores on the CTS2 were negative for all women in this group.

The CMI is an instrument designed to measure a history of child maltreatment and includes eight questions that have been used in a number of studies focused on IPV and child maltreatment issues that occurred before the age of 18 years. Specifically, a total of 22 women in the study (14.1 %) were physically attacked by a stranger during their childhood (defined as an event that occurred before the age of 18) and 40 women (25.6 %) were physically attacked by a parent or caretaker during their childhood. Eighteen women (11.5%) were sexually assaulted by

a stranger and 24 women (15.4%) were sexually assaulted by a parent or caretaker. Twenty six women (16.7%) were the victims of unwanted sexual contact by a parent or caretaker.

Thirty-one women (19.9 %) acknowledged physical abuse by a parent or caretaker and nearly 40% of women in the study (n=60) were victims of emotional abuse by a parent or caretaker. Finally, 56 women witnessed a family member striking, beating, hitting, or seriously injuring another family member (other than spanking with an open hand) during their childhood.

For the purpose of this study, respondents who acknowledged witnessing family violence more than one or two times were considered victims of child maltreatment. A summary of all respondents' experience witnessing family violence as a child (between the ages of 0 and 17) is shown in Table 4.

Table 4.

Subjects Who Witnessed Family Violence as a Child (n=156)

Number of Times Witnessing Violence	Frequency	Valid %	Cumulative %
Not at all	100	64.1	64.1
1 or 2 times	17	10.9	75.0
3-9 times	14	9.0	84.0
10-25 times	8	5.1	89.1
25 times or more	17	10.9	100.0

Group B

Group B is comprised of 25 women (16% of the total number of subjects) who received a positive score on the CTS2 indicating a positive history of IPV only. Women assigned to Group B did not indicate a history of child maltreatment (score on CMI was negative).

Participants who scored positively on at least one of four subscales of the CTS2 were considered positive for history of IPV as an adult. A positive response to at least one question

from a minimum of one of the subscales addressing physical assault, sexual coercion, and physical injury was considered a positive CTS score. A positive response to any one of the four items on the “severe” psychological aggression subscale was considered a positive CTS score.

Eighty-six women (55.1% of the total number of respondents) received a positive score on the CTS2. Of those 86 women, 45 (28.8%) scored positively on the physical injury scale, 65 (41.7%) scored positively on the physical assault scale, and 33 (21.2%) scored positively on the sexual coercion subscale. Nearly half of the women in the study (n=73; 46.8%) received a positive CTS2 score for victimization due to psychological aggression.

Group C

Group C includes subjects who experienced both IPV as an adult (positive score on the CTS2) and have a history of child maltreatment (positive CMI). Nearly 40% of participants in this study (39.1%) scored positively for a history of both IPV and child maltreatment (n=61).

Group D

Forty-one women in the study (26.3%) tested negative for history of child maltreatment and IPV as an adult as measured by the CMI and CTS2. Women who received negative scores on both instruments were assigned to Group D.

All of the participants were also assigned to one of two additional groups based on answers provided by participants during the initial questioning asked of all women. The groups were delineated according to participants’ responses (“yes” or “no”) to one question asking about a personal history of physical assault by an intimate partner. The entire sample (n=156 subjects) was partitioned into Groups E and F (described below).

Group E

Group E includes subjects who verbally acknowledged history of IPV as an adult when asked during the interview. All subjects were asked if they had ever experienced physical intimate partner violence (IPV). Over 30% of the women in this study acknowledged, when asked, that they had experienced IPV in their lifetime. Women included in this group responded “yes” to the question, “In any of your intimate relationships, did a partner ever beat, push, hit, slap, punch, or cut or do anything like that to you?” Of the women who acknowledged a history of IPV in their lifetime, the majority of women (n=32; 64%) had experienced this in only one relationship with an intimate partner. A smaller number of women (n=12; 24%) had experienced IPV in two separate relationships with different partners. Four individuals (8%) had experienced IPV in three relationships and one woman (2%) indicated that she had been in eight different violent relationships. Although over half of the study participants (n=86) received a positive score on the CTS scale, only 49 women (31.4%) acknowledged having a personal history of IPV when asked the question directly during the interview.

Group F

Group F includes subjects who denied a history of physical IPV as an adult when asked during the interview. Nearly 70% (n= 107; 68.6%) of the women in this study did not acknowledge when asked (responded “no”), that they had not experienced IPV in their lifetime.

Analysis of Demographic Variables of Subjects According to Victimization Groups:

Groups A, B, C, D

Differences between Groups A, B, C, and D according to abuse category and demographic variables were examined including age, income, marital status, number of children living with and not living with participant, education level, self rating of general health

(category) status, number of provider visits in the past year, and the number of surgeries experienced before the current one. State and trait anxiety scores were also explored.

When the mean values of age, income, marital status, number of children living with and not living with the participant, and education level were examined across the four groups there were no significant differences noted. Participants in the study were, on average, in their late forties, living with a partner, and had completed some college or education after high school. They lived in a household where the average annual income was approximately \$50,000. Most women (nearly 60%) had no children living with them. If a subject had children living with her, most women had one or two children in the home. Table 5 provides the demographics of study participants according to abuse history. It is of interest to note the higher number of non-whites in Group C – the victimization group – than in the other groups; however, no statistically significant differences were found among the groups.

Table 5.

Demographics of Participants by Abuse History (Lifetime History of Victimization) (n=156)

	Group A Hx Child Abuse Only	Group B Hx IPV as Adult Only	Group C Hx of Child Abuse/IPV	Group D No Hx of Abuse	Total Participants
	n=29 (18.6%)	n=25 (16%)	n=61 (39.1%)	n=41 (26.3%)	n=156 (100%)
Age					
Mean	49.79	48.28	46.6	48.37	48
Median	49	51	47	50	49
Range	41 (25-66)	44 (20-64)	45 (19-64)	54 (18-72)	54 (18-72)
Race					
White	28 (96.6%)	25 (100%)	57 (93.4%)	41 (100%)	151 (96.8%)
Non-white	1 (3.4%)	0	4 (6.6%)	0	5 (3.2%)
Annual Income Category (R)*					
< 10K	1 (3.7%)	1 (4.5%)	5 (9.1%)	2 (5.4%)	9 (6.4%)
10-20K	3 (11.1%)	4 (18.2%)	9 (16.4%)	3 (8.1%)	19 (13.5%)
20-35K	3 (11.1%)	2 (9.1%)	5 (9.1%)	8 (21.6%)	18 (12.8%)
35-50K	9 (33.3%)	5 (22.7%)	13 (23.6%)	6 (16.2%)	33 (23.4%)
50-75K	8 (29.6%)	4 (18.2%)	9 (16.4%)	7 (18.9%)	28 (19.9%)
> 75K	3 (11.1%)	6 (27.3%)	14 (25.5%)	11 (29.7%)	34 (24.1%)
	n=27	n=22	n=55	n=37	n=141
Living Status					
Lives alone	6 (20.7%)	11 (44%)	21 (34.4%)	14 (34.1%)	52 (33.3%)
Lives with partner	23 (79.3%)	14 (56%)	40 (65.6%)	27 (65.9%)	104 (66.7%)
# Children Living with Subject					
0					
1	16 (55.2%)	13 (52%)	39 (63.9%)	24 (58.5%)	92 (59%)
2	8 (27.6%)	6 (24%)	9 (14.8%)	4 (9.8%)	27 (17.3%)
3	4 (13.8%)	2 (8%)	9 (14.8%)	10 (24.4%)	25 (16%)
4	1 (3.4%)	4 (16%)	3 (4.9%)	3 (7.3%)	11 (7.1%)
	0 (0%)	0 (0%)	1 (1.6%)	0 (0%)	1 (.6%)
Education					
Junior hi or middle school	1 (3.4%)	1 (4.0%)	3 (4.9%)	3 (7.3%)	8 (5.1%)
High school/GED	9 (31%)	7 (28%)	18 (29.5%)	8 (19.5%)	42 (26.9%)
Some college/educ post hi school	10 (34.5%)	8 (32%)	17 (27.9%)	10 (24.4%)	45 (28.8%)
College grad: AD					
College grad: BS/BA	0 (0%)	1 (4%)	6 (9.8%)	8 (19.5%)	15 (9.6%)
Advanced degree	8 (27.6%)	5 (20%)	9 (14.8%)	10 (24.4%)	32 (20.6%)
	1 (3.4%)	3 (12%)	8 (13.1%)	2 (4.9%)	14 (9.0%)

(R)* = no missing values

Analysis of Health Related Characteristics of Subjects According to Victimization Groups:

A, B, C, D

Health related characteristics of women according to abuse history, Groups A, B, C, and D were then explored. When categories of general health were examined (General Health CAT) with the combined groups, a significant difference was noted among the four groups ($p=.03$). In further examination of general health (crosstabulation and chi square testing) using the four independent groups (A, B, C, D), I found that there was a significant difference between Group C – the cumulative victimization group – and Groups A, B, and D ($p=.003$). From inspection of the cell counts, it is clear that Group C has a lower proportion of "positive" general health responses (excellent, very good, good) and a higher proportion of "negative" general health responses (fair, poor).

The mean number of visits to a health care provider during the previous year and hospitalizations experienced during the previous year were also examined; however, no significant differences were found. The following table provides an overview of health related characteristics of subjects according to lifetime history of victimization.

Table 6.

Cross Tabulation of Health Related Characteristics of Women According to Abuse History (Positive CTS2, Positive CMI) (n=156)

	Group A Hx Child Abuse Only	Group B Hx IPV as Adult Only	Group C Hx of Child Abuse and IPV	Group D No Hx of Abuse	Total Participants
	n=29 (18.6%)	n=25 (16%)	n=61** (39.1%)	n=41 (26.3%)	n=156 (100%)
General Health Category *					
Excellent, very good, good	24 (82.8%)	21 (84%)	37 (60.7%)	33(80.5%)	115 (73.7%)
Fair, poor	5 (17.2%)	4 (16%)	24 (39.3%)	8 (19.5%)	41 (26.3%)
#Provider Visits in Past Year					
Mean # visits	4.52	4.16	4.61	4.27	4.43
Once	2 (6.9%)	2 (8.0%)	2 (3.3%)	5 (12.2%)	11 (7.1%)
Twice	2 (6.9%)	3 (12%)	3 (4.9%)	3 (7.3%)	11 (7.1%)
Three or Four times	4 (13.8%)	9 (36%)	12 (19.7%)	9 (22.0%)	34 (21.8%)
Five or more times	21 (72.4%)	11 (44%)	44 (72.1%)	24 (58.5%)	100 (64.1%)
Hospitalizations in Past Year					
Yes	6 (20.7%)	7 (28%)	19 (31.1%)	12 (29.3%)	44 (28.2%)
No	23 (79.3%)	18 (72%)	42 (68.9%)	29 (70.7%)	112 (71.8%)

*.p=.03 (Chi-Square; df =3); **.p=.003 (Chi-Square; df=1)

Analysis of Screening History of Subjects According to Victimization Groups: A, B, C, D

Routine screening for abuse by trained health care providers is recommended in all health care settings (Dienemann et al., 2005; McAfee, 1999; Rodriguez et al., 1999). When women in the present study were asked about being screened for IPV at the time of prior surgery, over 50% of the subjects acknowledged that screening for IPV had not taken place at that time (n=79). Nearly 20% of the subjects couldn't remember being screened at that time. In fact, only one quarter of women (25.2%) recalled being screened at the time of previous surgery.

In further examination of the screening history of subjects in the four groups outlined in the present study, over 70% of women who were screened, including women with history of abuse as well as non victims (n=27), thought it was a good thing to do. Only one woman (2.7%)

stated that she did not like the screening. Five women (13.5%) acknowledged feeling indifferent to it.

The woman who admitted that she “did not like being screened (for IPV)” lives in a civil union with a same sex partner. When specifically asked about her feelings related to the screening, she stated, “I don’t like the assumptions.” This participant did not self identify as a victim of IPV and CTS2 score was negative. She did indicate that she had been physically abused by a stranger at the age of twelve.

Many women who were not screened at the time of a previous surgery or who did not clearly remember being screened, indicated that they thought “it would be a good thing to do” (n=61; 54%). Only four of these women (3.5%) thought they wouldn’t like being asked the question. Thirty four women (30.1%) stated they would have felt indifferent to the screening.

Upon closer examination of the responses of the four women who stated they would not have liked being screened for IPV, I found that two of the women answered “yes” when asked about history of IPV and two acknowledged no history. One woman who stated that she had no history of IPV and scored negative on the CTS2 stated, “If I was abused, I think I wouldn’t tell the truth.” The second woman who did not acknowledge a history of IPV (and had a negative CTS2 score) stated, “I’m a private person.”

One woman who did disclose a history of IPV (and scored positively on the CTS2) did not offer further comment on this question (other than affirming that she didn’t think she would have liked being screened). This participant noted that in addition to experiencing IPV as an adult, she had also been physically attacked by a stranger at the age of 13 and was emotionally abused by a parent or caretaker from the age of five which lasted throughout her childhood.

The second participant who had a history of IPV stated that if she had been screened, she “might have felt slightly uncomfortable.” This woman had been beaten with a stick and pushed down the stairs in a previous relationship as an adult. She shared that the IPV had occurred over a year ago and acknowledged no history of child maltreatment.

Over 50% of women who were not screened (n=61) indicated they thought it would be a good thing to do; less than 5% of women who had not been screened didn't think they would like it; and nearly 30% of women who had not been screened felt indifferent about it. When women were asked about any experience of ever being screened in the clinical setting, over 50% remembered being screened at some point; however, approximately 40% had never been screened. Only a small number (less than 5%) could not remember at all. When queried about the experience of being screened for IPV in a health care setting, participants in this study for the most part indicated their support of routine screening. Table 7 provides an overview of women's screening experiences in health care settings. No significant differences were found.

Table 7.

Screening History of Women According to Abuse History (Positive CTS2, Positive CMI) Cross Tabulation

	Group A Hx Child Abuse Only	Group B Hx IPV as Adult Only	Group C Hx of Child Abuse and IPV	Group D No Hx of Abuse	Total Participants
Screened at Time of Last Surgery					
Yes	5 (20%)	4 (17.4%)	15 (26.8%)	12 (30.8%)	36 (25.2%)
No	14 (56%)	17 (73.9%)	30 (53.6%)	18 (46.2%)	79 (55.2%)
Don't Remember	6 (24%)	2 (8.7%)	11 (19.6%)	9 (23.1%)	28 (19.6%)
	n=25	n=23	n=56	n=39	n=143
Feelings about Screening					
Thought it was good	4 (66.7%)	2 (50%)	13 (81.3%)	8 (72.7%)	27 (73%)
Didn't like it	1 (16.7%)	0	0	0	1 (2.7%)
Felt indifferent	1 (16.7%)	2 (50%)	0	2 (18.2%)	5 (13.5%)
Other	0	0	3 (18.8%)	1 (9.1%)	4
	n=6	n=4	n=16	n=11	n=37
If Not Screened, Perceived					
Feelings About Screening					
Think it would be a good thing	11 (47.8%)	11 (52.4%)	24 (54.5%)	15 (50%)	61 (51.7%)
Don't think I'd like it	1 (4.3%)	1 (4.8%)	1 (2.3%)	1 (3.3%)	4 (3.4%)
Feel indifferent about it	9 (39.1%)	7 (33.3%)	11 (25%)	7 (23.3%)	34 (28.8%)
Other	0	2 (9.5%)	7 (15.9%)	5 (16.7%)	14 (11.9%)
	Missing Data #2 (8.7%)		Missing Data #1 (2.3%)	Missing Data #2 (6.7%)	Missing Data #5 (4.2%)
	n=23	n=21	n=44	n=30	n=118
Ever Screened in Clinical Setting					
Yes	15 (51.7%)	11 (44%)	40 (65.6%)	21 (51.2%)	87 (55.8%)
No	14 (48.3%)	13 (52%)	19 (31.1%)	19 (46.3%)	65 (41.6%)
Don't Remember	0	1 (4%)	2 (3.3%)	1 (2.4%)	4 (2.6%)
	n=29	n=25	n=61	n=41	n=156

Analysis of Demographic Variables of Subjects According to Self Perceived History of Physical Abuse: Groups E and F

Demographic characteristics and general health history of women in Study Groups E and F are presented in Tables 8 and 9. When demographics were examined, no significant differences in the two groups were noted.

Analysis of Health Related Characteristics of Subjects According to Self Perceived History of Physical Abuse: Groups E and F

Health related characteristics of women with and without self perceived history of IPV as an adult were examined including a general health category, and the number of provider visits and hospitalizations in the past year. Table 9 depicts the relationship between women with self perceived history of physical IPV (Group E) and those who do not acknowledge a history of physical IPV (Group F). A significant difference in the two groups was noted in the self described general health category ($p=.045$).

Analysis of Screening History of Subjects According to Self Perceived History of Physical Abuse: Groups E and F

Screening history of participants with and without self acknowledged history of IPV (Groups E and F) was also examined. Over 50% of women with a self perceived history of physical violence acknowledged that they were not screened at the time of their previous surgery. Over 90% of those who were screened agreed that it was a good thing to do while over 60% of those who were not screened indicated they thought it would be a good thing to do.

Table 8.

Demographic Characteristics of Women With and Without Self Perceived History of (Physical) IPV as an Adult Only

	Participants with No History of Self Perceived IPV (Study Group F)	Participants Who Acknowledged IPV When Asked (Study Group E)	Total Participants
	n=107 (68.6%)	n=49 (31.4%)	n=156 (100%)
Age			
Mean	47.91	47.98	47.93
Median	49	49	49
Range	54 (18-72)	41 (22-63)	54 (18-72)
Race			
White	105 (98.1%)	46 (93.9%)	151 (96.8%)
Non-white	2 (1.9%)	3 (6.1%)	5 (3.2%)
Annual Income Category			
< 10K	5 (5.2%)	4 (9.1%)	9 (6.4%)
10-20K	12 (12.4%)	7 (15.9%)	19 (13.5%)
20-35K	13 (13.4%)	5 (11.4%)	18 (12.8%)
35-50K	22 (22.7%)	11 (25.0%)	33 (23.4%)
50-75K	22 (22.7%)	6 (13.6%)	28 (19.9%)
> 75K	23 (23.7%)	11 (25%)	34 (24.1%)
	n=97	n=44	n=141
Living Status (n=156)			
Lives alone	34 (31.8%)	18 (36.7%)	52 (33.3%)
Lives with partner	73 (68.2%)	31 (63.3%)	104 (66.7%)
# Children Living with Subject			
0	63 (58.9%)	29 (59.2%)	92 (59.0%)
1	15 (14.0%)	12 (24.5%)	27 (17.3%)
2	19 (17.8%)	6 (12.2%)	25 (16%)
3	10 (9.3%)	1 (2%)	11 (7.1%)
4	0	1 (2%)	1 (.6%)
Education			
Elementary school	0	0	0
Junior hi or middle school	4 (3.7%)	4 (8.2%)	8 (5.1%)
High school/GED	31 (29%)	11 (22.4%)	42 (26.9%)
Some college/educ post hi school	31 (29%)	14 (28.6%)	45 (28.8%)
College grad: AD	11 (10.3%)	4 (8.2%)	15 (9.6%)
College grad: BS/BA	22 (20.6%)	10 (20.4%)	32 (20.5%)
Advanced degree	8 (7.5%)	6 (12.2%)	14 (9.0%)

Table 9.

Cross Tabulation of Health Related Characteristics of Women With and Without Self Perceived History of Physical Abuse as an Adult Only*

	Participants with No History of Self Perceived IPV (Study Group F) n=107 (68.6%)	Participants Who Acknowledged IPV When Asked (Study Group E) n=49 (31.4%)	Total Participants n=156 (100%)
General Health Category			
Excellent, very good, good	84 (78.5%)	31 (63.3%)	115 (73.7%)
Fair, poor	23 (21.5%)	18 (36.7%)	41 (26.3%)
**			
#Provider Visits in Past Year			
Once	8 (7.5%)	3 (6.1%)	11 (7.1%)
Twice	7 (6.5%)	4 (8.2%)	11 (7.1%)
Three or Four times	26 (24.3%)	8 (16.3%)	34 (21.8%)
Five or more times	66 (61.7%)	34 (69.4%)	100 (64.1%)
Hospitalizations in Past Year			
Yes	29 (27.1%)	15 (30.6%)	44 (28.2%)
No	78 (72.9%)	34 (69.4%)	112 (71.8%)

*The alpha level is set at 0.05 using a two-tailed test of significance; ** $p=.045$ (df=1); (Chi-Square)

When women were queried about the experience of being screened for IPV in a health care setting, women with self perceived history of physical IPV as an adult for the most part indicated their support of routine screening. No significant differences were found between the two groups. Table 10 includes an overview of the screening experiences of participants with and without self identified IPV.

Verbal Response of Subjects Compared to Total CTS2 Scores: Groups E and F

I was interested in comparing the way women responded when directly questioned about a history of physical IPV with the physical IPV responses on the CTS2. An exploratory analysis of this relationship was completed. Forty seven women who responded “yes” to the question (“In any of your intimate relationships did a partner ever beat, push, hit, slap, punch, or cut or do anything like that to you?”) also received a positive score on the CTS2. Likewise, 84 women

who responded “no” to that question also received a negative score on the CTS2. These 131 women (47 + 84) had CTS2 scores that coincided with their verbal response. In this study, the CTS2 and verbal responses were generally in agreement. However, conflicting measures did occur.

Table 10.

Relationship (Cross Tabulation) of Women With Self Perceived History of (Physical) IPV as an Adult Only to Screening in Health Care Settings

	Participants with No History of Self Perceived IPV (Study Group F)	Participants Who Acknowledged IPV When Asked (Study Group E)	Total Participants
	n=107 (68.6%)	n=49 (31.4%)	n=156 (100%)
Screened at Time of Last Surgery			
Yes	26 (26.8%)	10 (21.7%)	36 (25.2%)
No	53 (54.6%)	26 (56.5%)	79 (55.2%)
Don't Remember	18 (18.6%)	10 (21.7%)	28 (19.6%)
	n=97	n=46	n=143
Feelings about Screening			
Thought it was good	17 (65.4%)	10 (90.9%)	27 (73%)
Didn't like it	1 (3.8%)	0 (0%)	1 (2.7%)
Felt indifferent	5 (19.2%)	0 (0%)	5 (13.5%)
Other	3 (11.5%)	1 (9.1%)	4 (10.8%)
	n=26	n=11	n=37
If Not Screened, Perceived Feelings About Screening			
Think it would be a good thing	38 (47.5%)	23 (60.5%)	61 (51.7%)
Don't think I'd like it	2 (2.5%)	2 (5.3%)	4 (3.4%)
Feel indifferent about it	25 (31.3%)	9 (23.7%)	34 (28.8%)
Other	10 (12.5%)	4 (10.5%)	14 (11.9%)
	Missing data # 5 (6.3%) n=80	n=38	Missing data #5 (4.2%) n=118
Ever Screened in Clinical Setting			
Yes	55 (51.4%)	32 (65.3%)	87 (55.8%)
No	50 (46.7%)	15 (30.6%)	65 (41.7%)
Don't Remember	2 (1.9%)	2 (4.1%)	4 (2.6%)
	n=107	n=49	n=156

A total of 23 women who responded “no” when directly asked about history of IPV received a positive score on the CTS2. These women verbally denied a history of physical IPV, yet scored positively when specifics about experiences during adult relationships were addressed. Of particular interest is another group: women who acknowledged a history of IPV (said “yes”) when in fact, their CTS2 scores were negative (n=2). (See Table 11.)

Table 11.

Comparison of Women Who Responded “Yes” or “No” When Asked about History of Physical IPV to CTS Score (Positive or Negative) (n=156)

	CTS score +	CTS score -	Total
IPV History			
Yes (Group E)	47	2	49
No (Group F)	23	84	107

Of the four subscales of the CTS2 used in this study, the psychological aggression, physical assault, sexual coercion, and injury scales, I was particularly interested in the number of subscales that women had experienced based on their responses to the questions on the CTS2. Because women were asked about a history of *physical* IPV, I was interested in looking only at the three subscales of the CTS2 that refer to physical violence: the physical assault, sexual coercion, and injury scales. Of the 49 women who verbally acknowledged a history of physical IPV (Group E), two women, whose experiences are described in detail below, did not experience an event described in one of the subscales and three women experienced an event from one of the subscales. Twenty-two women experienced events from two of the subscales and an additional 22 women had experienced events from all three of the subscales.

Upon closer analysis of responses from women who had denied a history of IPV (Group F), I looked at the number of positive CTS2 subscales for each of the 23 women who verbally denied IPV but scored positively on the CTS2. Eighteen women who verbally denied a history

of IPV had in fact experienced an event from one of the three physical violence subscales. Three women who said “no” to a history of IPV had experienced two events categorized under one of the three physical violence subscales. Of particular interest were the two women who verbally denied a history of IPV when asked and yet, had experienced events from all three of the CTS subscales: physical assault, sexual coercion, and physical injury. (See Table 12.)

Table 12.

Comparison of Women’s Verbal Response When Asked about History of Physical IPV to Number of Subsets of CTS Subscales (Physical Assault, Sexual Coercion and Injury Scale) (n=156)

	Number of Positive Subscales				Total
	0	1	2	3	
IPV History					
Yes (Group E)	2	3	22	22	49
No (Group F)	84	18	3	2	107

D. Findings

Data Analysis – Research Question One

The first research question to be addressed asked, “Are women who have suffered child maltreatment, IPV, or both during their lifespan more likely to undergo surgical intervention than women who have no history of victimization?” It was hypothesized that adult women who have suffered victimization during their lifespan – either child maltreatment, IPV as an adult, or both – are more likely to undergo surgical intervention than adult women who have no history of child maltreatment or IPV. A comparison of the means (ANOVA) according to victimization group and numbers of previous surgery was performed.

One hundred forty four women in the study (92.3%) had undergone previous surgery. Only 12 participants (7.7%) had not experienced previous surgical intervention. A significant difference was noted between women who had a history of child victimization only (Group A) and women who had experienced both child maltreatment and adult IPV (Group C).

The mean number of surgeries experienced by women who had a history of child victimization only (Group A) was 3.08. Women who had a history of IPV as an adult only (Group B) experienced a mean number of 4.48 surgeries over the life course. Women who had a history of both child maltreatment and IPV (Group C) experienced a mean number of 4.38 surgeries and those women who acknowledged no history of child maltreatment or IPV (Group D) experienced a mean number of 3.90 surgeries over the life course.

Upon further analysis, I found significant results when examining the mean differences (ANOVA) between groups ($p=.023$). A post hoc Scheffé test determined that a difference in the means exists between Group A and Group C ($p=.05$). On average, the number of surgeries experienced by women in Group C – survivors of both IPV and child maltreatment – was significantly higher than the average number of surgeries experienced by women in Group A – the child maltreatment only group. Differences in the means of Groups A and B approached significance ($p=.088$). Table 13 provides an overview of women’s history of prior surgery according to victimization history.

Next, I looked at adult women who when asked, acknowledged a history of physical IPV (Group E) and women who when asked, denied a history of physical IPV (Group F). A comparison of the means according to the two groups and numbers of previous surgery was performed. The mean number of surgeries experienced by women in Group E, the “victimized group,” was 4.80. Women in Group F, the “non-victimized group,” experienced a mean number

of 3.67 surgeries over the life course. A significant difference was noted in the numbers of prior surgeries experienced by women according to self perceived history of physical IPV ($p=.001$).

Table 14 provides an overview of women's history of prior surgery according to self perceived history of IPV.

Table 13.

Comparison of Means (and Numbers) of Previous Surgery According to Victimization Group

	Group A	Group B	Group C	Group D	Total
	n=25 (17.4%)	n=23 (16%)	n=56 (38.9%)	n=40 (27.8%)	n=144 (100%)
# Prior Surgeries (Categories)					
Mean	3.08*	4.48	4.38*	3.90	4.03
1	4 (16%)	3 (13%)	4 (7.1%)	4 (10%)	15 (10.4%)
2	8 (32%)	2 (8.7%)	9 (16.1%)	8 (20%)	27 (18.8%)
3	5 (20%)	3 (13%)	7 (12.5%)	5 (12.5%)	20 (13.9%)
4	3 (12%)	1 (4.3%)	5 (8.9%)	8 (20%)	17 (11.8%)
5	1 (4%)	5 (21.7%)	7 (12.5%)	4 (10%)	17 (11.8%)
6 - 10	3 (12%)	5 (21.7%)	21 (37.5%)	8 (20%)	37 (25.7%)
11-20	1 (4%)	4 (17.4%)	3 (5.4%)	3 (7.5%)	11 (7.6%)

* $p=.023$ (ANOVA)

Table 14.

Comparison of Means (and Numbers) of Previous Surgery According to Self Perceived History of Physical IPV (n=144)

	Participants with No History of Self Perceived IPV (Group F)	Participants Who Acknowledged IPV When Asked (Group E)	Total Participants
	n=98	n=46	n=144
# Prior Surgeries (Categories)			
Mean	3.67*	4.80*	4.03
1	14 (14.3%)	1 (2.2%)	15 (10.4%)
2	20 (20.4%)	7 (15.2%)	27 (18.8%)
3	15 (15.3%)	5 (10.9%)	20 (13.9%)
4	14 (14.3%)	3 (6.5%)	17 (11.8%)
5	11 (11.2%)	6 (13.0%)	17 (11.8%)
6-10	18 (18.4%)	19 (41.3%)	37 (25.7%)
11-20	6 (6.1%)	5 (10.9%)	11 (7.6%)

*p=.001(ANOVA)

Data Analysis – Research Question Two

The second research question to be addressed asked, “Are women who are victims of child maltreatment only, IPV as an adult only, or victims of maltreatment as a child and IPV as an adult, more likely to undergo specific types of surgical intervention than women who have no history of victimization?” In order to appropriately address the question, I grouped surgeries in two different ways. Both are similar to the way in which surgery was coded in the Hastings and Kaufman Kantor study (2003).

Type of Surgery

First, surgeries were coded according to the nature of the surgery. A total of nine categories were created and every surgery that a participant experienced at some point over the life course was placed in the category that best represented the specific surgery type. Surgery

identified as “abdominal” included operations such as cholecystectomies, appendectomies, hernia operations, bariatric or gastric bypass surgeries, splenectomies, and lysis of adhesions.

The second category was identified as “breast” and included all procedures in which breast surgery took place including breast biopsies, lumpectomies, mastectomies, reconstructions and breast reductions. The category of “exploratory surgery” included any type of surgery that was described as “exploratory” and included laparoscopies and laparotomies. Gastrointestinal “GI” surgery included those operations that related to the gastrointestinal tract such as surgery for gastric reflux, bowel resections, polypectomies, colostomies, ileostomies, anal fissure and rectal repairs, hemorrhoidectomies, and colonoscopies. Genitourinary “GU” surgeries included procedures such as lithotripsy, bladder repair, and cystoscopy.

Gynecological “gyne” surgery included surgeries related to the female reproductive organs such as tubal ligations, hysterectomies, cesarean sections, ovarian cystectomies, salpingo-oophorectomies, dilatation and curettage (D&Cs), hysteroscopies, colposcopies, and cervical biopsies. Procedures coded in the orthopedic “ortho” grouping included those affecting the skeletal system or associated muscles, joints, or ligaments such as carpel tunnel surgery, arthroscopies, arthrotomies, bunionectomies, open reduction and internal fixation (ORIF) of skeletal fractures, hardware removal, laminectomies and discectomies, total joint replacement (hip, knee, etc), finger amputation, rotator cuff repair, and anterior cruciate ligament (ACL) repair.

The category coded as “plastics” includes surgeries that were performed for repair, remodeling, or restoration of a body part. Examples of surgeries included in the “plastics” category are abdominoplasty, blepharoplasty, and paniclectomy. The final category labeled as “other” includes those types of surgery that did not fit into one of the previous eight categories.

Examples of surgeries listed in this category include tonsillectomies, oral surgeries such as extraction of wisdom teeth, repair of lacerations, nasal surgeries, ear surgeries such as myringotomies and tubes, cardio-thoracic surgery, eye surgeries such as cataracts, and surgery for varicose veins.

Mean numbers of each type of surgery were examined with women's lifetime history of victimization; however, findings were not significant. There is no significant difference in the average number of surgeries in each of the surgical type groups when studied according to women's history of victimization (ie Groups A, B, C, D). Table 15 outlines the means and numbers of surgery experienced by women according to victimization history.

Table 15.

Comparison of Means and Number of Surgery Types by Women's Victimization History (n=144)

	Group A n=25	Group B n=23	Group C n=56	Group D n=40	Total n=144
Abdominal	1.50 (n=4)	1.86 (n=7)	1.35 (n=23)	1.20 (n=10)	1.41 (n=44)
Breast	1.33 (n=3)	2.33 (n=3)	2.00 (n=10)	1.56 (n=9)	1.80 (n=25)
Exploratory	1.00 (n=2)	5.00 (n=1)	1.67 (n=6)	1.00 (n=1)	1.80 (n=10)
^GI	1.50 (n=2)	1.33 (n=3)	1.33 (n=6)	1.00 (n=4)	1.27 (n=15)
^^GU	2.00 (n=1)	1.00 (n=1)	1.60 (n=5)	1.00 (n=2)	1.44 (n=9)
^^^GYNE	1.53 (n=17)	2.35 (n=17)	2.07 (n=43)	2.07 (n=30)	2.03 (n=107)
Orthopedic	1.89 (n=9)	3.17 (n=12)	2.13 (n=30)	3.44 (n=16)	2.60 (n=67)
Plastics	1.00 (n=1)	1.00 (n=2)	1.00 (n=1)	0 (n=0)	1.00 (n=4)
Other	2.07 (n=14)	1.46 (n=13)	1.85 (n=33)	1.58 (n=24)	1.75 (n=84)

^GI: gastrointestinal; ^^GU: genitourinary; ^^^GYNE: gynecological

Major and Minor Surgery

I also grouped surgeries according to the extensiveness and seriousness of the procedure. Major surgery included procedures that were more comprehensive in nature or required extended surgical time or an extended hospital stay. Examples of major surgery include most abdominal

and pelvic surgeries, all exploratory abdominal procedures, laparoscopic or open, and all joint replacements. Procedures that required smaller amounts of surgical time or in-hospital recuperation time including D&Cs, tonsillectomies, dental extractions, and most nasal, ophthalmic, and otologic surgeries were coded as minor surgeries.

When the four groups (A, B, C, D) were examined with the mean numbers of surgeries according to severity (major vs minor), no significant findings were noted; however, findings in the major surgery category approached significance ($p=.06$). A post hoc Scheffé test confirmed that the mean difference between Groups A and C approaches significance ($p=.07$). The average number of major surgeries experienced by women who are survivors of both child maltreatment and IPV as an adult approached a significantly higher number than the average number of major surgeries experienced by women with history of child maltreatment only. Table 16 outlines the findings when mean numbers of surgical intervention (major vs minor) according to victimization history were examined.

Table 16.

Mean Numbers of Surgical Intervention (Major vs Minor) and Analysis of Variance Results (ANOVA) of Subjects by Group (Type of Abuse) (n=156)

	Child Only (Group A) n=29	IPV Only (Group B) n=25	IPV & Child (Group C) n=61	No Abuse (Group D) n=41	Total
Mean # Surgeries					
Major	1.62*	3.04	3.26*	2.95	2.84
Minor	1.41	2.00	1.52	1.41	1.55

* $p = .06$

Data Analysis – Research Question Three

In addressing the third research question, I wanted to know if “women with a history of child maltreatment only, IPV as an adult only, or both, experience higher levels of state (pre-operative) and trait anxiety as measured by the State-Trait Anxiety Inventory for Adults (STAI), than women who have no history of violence.” It was hypothesized that adult women who have suffered child maltreatment, IPV as an adult, or both, experience higher levels of state and trait anxiety, as measured by the STAI, than adult women who have no history of child maltreatment or IPV.

Higher scores on the STAI indicate higher anxiety levels. Similarly, lower levels of state and trait anxiety generated a lower STAI score. Total scores for the state and trait anxiety scales range from a minimum of 20 to a maximum of 80 (Spielberger et al., 1983).

In closer examination of Groups A, B, C, and D, no significant difference was noted in state anxiety scores. When trait anxiety was examined in these four groups, I found a significant difference in the means between groups ($p=.04$). A post hoc Scheffé confirmed that there is a difference in the mean scores of subjects in Group C (women with history of victimization as both a child and adult) and Group D (women who scored negative on the CMI and CTS2). The average STAI (trait) score for Group C is significantly higher than the average STAI (trait) score for Group D. Table 17 provides an overview of the means of the STAI scores of subjects according to their history of victimization.

Table 17.

Mean Values and Analysis of Variance Results (ANOVA) for STAI (Total) Scores of Subjects by Group (Type of Abuse)

	Group A n=29	Group B n=25	Group C n=61	Group D n=41	Total n=156
STAI state	33.45	29.80	35.84	30.85	33.12
STAI trait	34.52	34.44	36.95*	30.10*	34.29

* $p = .04$ (Mean difference is significant at the .05 level.)

Next, I looked at the groupings of women who when asked, acknowledged a history of physical IPV (Group E) and women who when asked, denied a history of physical IPV (Group F). A comparison of the mean STAI scores of the two groups was performed. The mean STAI state score of women in Group E, the “victimized group,” was 36.53. The mean state score for women in Group F, the “non-victimized group,” was 31.55. When trait scores were examined, the mean score of women in Group E was 36.86. The mean trait score of women in Group F was 33.12. There was a significant difference in the total STAI (state) scores of women according to self perceived history of physical IPV ($p = .02$). Women who acknowledged a history of physical IPV as an adult had significantly greater state anxiety than women who did not acknowledge a history of physical IPV as an adult. Additionally, the difference in the total STAI (trait) scores of women in this grouping approached significance ($p = .065$). Table 18 provides an overview of the mean values of women’s total STAI scores according to self perceived history of IPV.

Table 18.

Comparison of the Mean Values for Total STAI Scores of Subjects According to Self-Perceived History of Physical IPV as an Adult (n=156)

	Group F n=107	Group E n=49	Total n=156
STAI state*	31.55	36.53	33.12
STAI trait**	33.12	36.86	34.29

*p = .02; **p = .065

Data Analysis – Research Questions Four and Five

To address the issues raised in answering questions four and five, I was interested in learning information about participants in the study that was more qualitative in nature. Women who had acknowledged experiencing IPV in their current relationship with a partner were asked for permission to recontact them once following their surgery at a time and number that was agreed upon by the participant.

My plan was to interview women who were in a currently abusive relationship to gain insight into answers to two additional questions. First, I wanted to know how women who are victims of IPV in their current relationship would describe their recent experience as a patient in the perioperative setting (question four). Question five asked, “What are the gaps in care or unmet needs identified by women who are currently experiencing IPV and who have recently been patients in a perioperative setting?” Based on their responses, I hoped to identify nursing interventions that study informants suggested as strategies to enhance the nursing care provided to them by perioperative nurses.

E. Discussion

A total of eight women met the criteria (acknowledgment of IPV in their current relationship with a partner) and were asked for permission to recontact for this portion of the study. This was a much smaller number than I had anticipated prior to the start of the data collection. All eight women who were asked at the conclusion of the first interview for permission to recontact, agreed to a follow up call that would take place at a mutually agreed upon time following their surgery.

Women were contacted between one and twenty-one days post surgery. After confirming that the participant was still in agreement to participate in this portion of the study and willing to answer two additional questions about their perioperative experience, I asked the two questions.

Informant Number 1

A 30 year old woman with a history of panic attacks, who had undergone five previous surgeries, acknowledged one prior relationship (from the age of 18 until 20 years) during which IPV had been present. She was interviewed 21 days after her surgery (a gastric bypass). In a previous relationship, her partner had beaten her in front of her children, pulled her down the stairs, and threw boiling water at her vaginal area. She was asked for a follow up interview because the responses she shared during the CTS2 indicated that there was ongoing violence in her current relationship. Her partner insulted or swore at her three to five times in the past year and destroyed something that belonged to her twice in the past year. She went to a doctor (for counseling) because of a fight with her partner more than 20 times in the past year. Additionally, more than 20 times in the past year her partner shouted or yelled at her, did something to spite her, stomped out of the room or house or yard during a disagreement, and insisted on sex when

she did not want to (but did not use physical force). Her partner insisted she have oral or anal sex (but did not use physical force) three to five times in the past year.

She described her recent perioperative experience as “wonderful and relaxing.” Her opinion of the nurses – particularly the nurses in the Same Day Program (SDP) – was that they were “great.” She acknowledged that this experience was much improved over her last hospital visit during which she felt “nervous” and “frightened” due to an inadequate number of nursing staff on the unit.

Informant Number 2

A 63 year old divorced woman was re-interviewed four days after her surgery, a laparoscopy and cystocele repair. She had experienced three prior surgeries. The participant had indicated no history of previous IPV even though her CTS score indicated a history of psychological aggression and sexual coercion (did not happen in the past year, but happened before). The woman had a history of child maltreatment having been physically attacked, sexually molested or assaulted, involved in unwanted sexual contact, physically abused, and emotionally abused by a caretaker or parent throughout her childhood from the age of three. Additionally, she had seen a family member strike, beat, hit, or seriously injure another family member (not spanking with an open hand) between ten and twenty-five times during her childhood (before the age of eighteen).

This participant had spoken freely about her history of maltreatment as a child and shared that she had been “seeing a therapist for years.” She was candid about previous hospital experiences during which she had felt “abandoned” due to overworked nurses and admitted that she had been concerned about the upcoming surgery that was scheduled. She shared that she had

not been screened for IPV at the time of her previous surgery in 1986 but said that she thought she “would have felt intimidated by the question at the time. Today I would be okay with it.”

Because she had acknowledged negative experiences related to previous surgery, I asked for permission to contact her about this surgical experience at some point during her post operative period. When reached after her surgery, she admitted that this experience had been “positive” and that upon arrival in the OR, “everything was ready” which relaxed her. She had been encouraged to listen to taped music, which had helped to ease her anxiety. She felt “confident” during the perioperative process and shared how impressed she was to be permitted to “take my pet rock into the OR with me.” This helped her to feel “cared about and supported. The nurses explained everything to me and welcomed the use of my taped music. I felt respected. They treated me like an individual.”

Informant Number 3

This 32 year old woman was interviewed four days after her surgery – a hip arthroscopy. She had one previous surgery, a cesarean section. She acknowledged no history of IPV although her CTS score was positive for psychological aggression and physical assault (happened over one year ago). She also acknowledged a history of child maltreatment having been physically abused or attacked by a caretaker/parent from the age of one until the age of thirteen. This woman was asked for permission for a second interview because she had mentioned that during a previous hospital stay, she had become so upset that she had experienced “panic attacks” and had actually left the facility prior to being discharged by the provider. She stated that a need for more information at that time was not met and believes that this lack of information led to the panic attack.

During the post operative interview, this participant acknowledged that “the nursing staff was great.” “They gave me good explanations and I had good pain control after my surgery. Even though I never did see a doctor, I appreciated the support of the nurses.”

Informant Number 4

A 58 year old married woman was re-interviewed four days after her hernia repair, which was her eighth surgery. Although she stated that she didn’t remember if she had been previously screened for IPV during her previous surgery related hospitalization, she admitted that she didn’t think she would like being asked the question. She acknowledged a personal history of IPV and indicated that “his screaming at me” was the most serious act that ever occurred.

All four subscales of her CTS score were positive. In the past year, she had been insulted or sworn at by a partner 6 – 10 times, her partner had destroyed something that belonged to her twice, her partner shouted or yelled at her 11 – 20 times, stomped out of the room or house or yard twice during a disagreement, and insisted on sex 3 – 5 times when she did not want to (but did not use physical force.) This participant had been physically attacked by a stranger at the age of 13 and emotionally abused by a parent or caretaker from the age of five throughout her childhood.

This recent perioperative experience was not a positive one. She would have liked more information about what would be happening – especially from the anesthetist. She had a three hour wait which increased her stress level. She noted that the nurses seemed “overworked:” they kept “switching assignments” and at times, activity on the unit seemed “like chaos.” She was “unable to bond with the nurses” because of this chaotic environment.

Informant Number 5

This was a 58 year old woman scheduled for a hip replacement. She had experienced four previous surgeries including a cesarean section, an exploratory laparoscopy, a D&C, and an operation on her left foot. Although she had not been previously screened for IPV, she thought it would be a good thing to do. She acknowledged IPV in one previous relationship during which the most serious act of violence she experienced involved physical “shoving.” Her CTS2 score was positive and revealed that over a year ago she had experienced her partner insulting or swearing at her, pushing or shoving her, calling her fat or ugly, shouting or yelling at her, and stomping out of the room or house or yard during a disagreement.

In her childhood, this informant had been physically attacked, and emotionally and physically abused by a caretaker or parent beginning at five or six years of age. Additionally she observed a family member strike, beat, hit, or seriously injure another family member from three to nine times during her childhood.

Although this participant did not acknowledge ongoing IPV, she was asked for permission to recontact her because of information she shared during the initial interview. When discussing previous interactions with health care providers, she mentioned that one reason she liked her current surgeon so much was because “he treats the whole person. He asks about family history and about any recent losses I might have had, which I think is important.” This participant went on to say that following previous surgery she had experienced some side effects after anesthesia, the most profound symptom being an “overwhelming sense of sadness” post anesthesia.

She was interviewed seven days after her surgery and shared that this experience was positive and “everything went well.” She did mention that after talking with her anesthetist, she

“chose to have spinal rather than general anesthesia” and as a result, had “no post operative side effects from the anesthesia.”

Informant Number 6

This 55 year old woman, who was scheduled for a total knee replacement, had undergone 11 previous surgeries. She acknowledged having been screened for IPV in the past including just prior to her most recent surgery and in her primary care practitioner’s office during regularly scheduled visits. She had a history of IPV in one previous relationship and during that relationship the most serious act that occurred included physical beatings that resulted in at least one fracture and “bad mental abuse.”

Her CTS2 score revealed that over a year ago she experienced acts perpetrated by her partner such as twisting her arm or her hair, insulting or swearing at her, throwing something at her that could hurt, or having a sprain, bruise, or small cut because of a fight. She also acknowledged being pushed or shoved, passing out from being hit on the head in a fight, being punched or hit with something that could hurt, and having something that belonged to her destroyed. Additionally, she was choked, slammed against a wall, and grabbed and beaten up. This informant needed to see a doctor because of a fight but did not go. She was slapped, had a broken bone after a fight, and acknowledged his threats to hit or throw something at her. She was kicked and still felt physical pain that still hurt the next day because of a fight.

This woman had experienced being physically attacked as a child both by a stranger and a caretaker or parent beginning at the age of three. She was also sexually assaulted on two different occasions by a stranger: once at age 5 and again at age 13. She was physically and emotionally abused by a caretaker or parent from the age of three or four throughout her

childhood and as a child witnessed a family member strike, beat, hit, or seriously injure another family member three – nine times.

In her present relationship, she acknowledged being shouted or yelled at more than 20 times in the past year. Additionally, during the past year her partner stomped out of the room or house or yard during a disagreement and did something to spite her three to five times. Although ongoing IPV in her relationship is not present (according to the definition of IPV in this study), I chose to ask permission to interview this subject post operatively as it does appear there may be considerable verbal abuse in the relationship.

She was interviewed ten days after surgery and described her recent surgical experience as “great.” There were “no problems” and “they explained everything well.” This informant acknowledged that she “... felt very much supported by the nurses.” She did mention a negative experience related to a narcotic she was prescribed (the nurse apparently “tried to cut a sustained-release tablet in half”) but this occurred on the inpatient unit after she was admitted and was not related to her surgical experience.

Informant Number 7

This is a 25 year old woman, currently living with a partner and a nine month old child, who was scheduled for an arthroscopy of her ankle. She has seen a health care provider about her own health five or more times in the past year (not including pre-natal or pregnancy-related care) and has had four previous surgeries. When asked to compare her general health to the health of other women her age, she rated her general health as “fair.” She has been screened for IPV in the past including during regular visits to her obstetrician and on the birthing pavilion when she was in for the birth of her baby. She acknowledged no history of IPV but did experience being physically attacked by a caretaker or parent as a child from the age of five. She described these

attacks as “spankings.” She also noted that she witnessed a family member strike, beat, hit, or seriously injure another family member one or two times during her childhood.

Although her CTS2 score was not positive for IPV according to the definition used in this study, she did admit that in the past year her partner had insulted or sworn at her six to ten times, shouted or yelled at her three to five times, stomped out of the room or house or yard during a disagreement three to five times, and did something to spite her twice. These represent minor items on the psychological aggression subscale and thus, do not indicate IPV according to the definition in this study. However, because of the number of times she experienced these behaviors and the fact that she was pregnant for three months during the previous year (a high risk time for IPV) I asked for permission to recontact her after her surgery.

This participant was interviewed one day after her surgery and she exclaimed that the experience was “awesome.” The nurses “helped me to feel calm, they were courteous, and just wonderful.” She had no suggestions for any improvement in nursing care.

Informant Number 8

This 26 year old unmarried subject with no children was scheduled for surgical intervention on her shoulder. She had undergone two previous surgeries and could not recall ever being screened for IPV in the past. When asked how she thought she might have felt if she had been asked the question, she responded, “I would have been uncomfortable. My partner was with me at the time and I was in an abusive relationship.” (It is important to note that practitioners who screen for IPV in the clinical setting are instructed to do so only when the patient is alone and in a private setting and especially not in the presence of another adult. If this cannot be accomplished, clinicians are instructed to not screen for IPV at that time.) Compared to other women her age, she rated her general health as “very good.”

She stated that she had been a victim of IPV in two previous relationships and that the most serious act she could recall was when she was “punched in the head.” Her CTS2, which was positive for IPV, revealed that over a year ago a partner had thrown something at her that could hurt, twisted her arm or hair, caused a sprain, bruise, or small cut because of a fight, made her have sex without a condom, pushed or shoved her, used a knife or gun on her, punched or hit her with something that could hurt, destroyed something that belonged to her, choked her, slammed her against a wall, beat her up, grabbed her, used force to make her have sex, stomped out of the room or house or yard during a disagreement, slapped her, threatened to hit or throw something at her, and used threats to make her have sex. She had felt physical pain that still hurt the next day because of a fight with a partner, on at least one occasion went to a doctor because of a fight with a partner and following at least one additional event, needed to see a doctor because of a fight with a partner, but did not go.

As a child she was physically attacked and sexually assaulted by a stranger at the age of 14 and physically attacked by a parent or caretaker at the age of five. She acknowledged physical and emotional abuse by a caretaker or parent from the age of four or five noting that the physical abuse ended around age ten but the emotional abuse continued throughout childhood. Additionally, she witnessed a family member strike, beat, hit, or seriously injure another family member three to nine times during her childhood.

In her current relationship, ongoing psychological aggression is evidenced by her acknowledgement that her partner insulted or swore at her and shouted or yelled at her six to ten times during the past year. He called her fat or ugly twice and did something to spite her more than twenty times in the past year.

When interviewed thirteen days after her surgery, the subject acknowledged that “the nurses were supportive and gave me good explanations. I was really scared and they were very gentle.”

V. DISCUSSION

A. Summary

The purpose of this study was to examine the relationship between women's history of victimization and surgery. The following research questions were proposed:

1. Are women who have suffered child maltreatment, IPV or both during their lifespan more likely to undergo surgical interventions than women who have no history of victimization?
2. Are women who are victims of child maltreatment, IPV, or both more likely to undergo specific types of surgical intervention than women who have no history of victimization?
3. Do women with a history of child maltreatment, IPV, or both experience higher levels of state (pre-operative) and trait anxiety as measured by the State-Trait Anxiety Inventory for Adults (STAI), than women who have no history of violence?
4. How do women who are victims of IPV in their current relationship describe their recent experience as a patient in a perioperative setting?
5. What are the gaps in care or unmet needs identified by women who are currently experiencing IPV and who have recently been patients in a perioperative setting?

A final sample of 156 women was recruited from several surgical clinics and the pre admission testing area in an academic medical center and tertiary care trauma center in northern New England. Study participants completed telephone interviews during which questions were asked to obtain information on personal demographics, general and perceived health status,

previous hospitalizations, prior surgeries, history of IPV, and previous screening for IPV. Three instruments, the CTS2, STAI, and CMI, were utilized to measure history of IPV as an adult, state and trait anxiety, and history of child maltreatment.

Two hypotheses were tested. It was hypothesized that women who have suffered victimization during their lifetime – either child maltreatment, IPV as an adult, or both – are more likely to undergo surgical intervention than women who have no history of child maltreatment or IPV. Hypothesis number two was that women who have suffered child maltreatment, IPV as an adult, or both – experience higher levels of pre-operative (state) and trait anxiety, as measured by the STAI, than women who have no history of child maltreatment or IPV.

Analyses, including an examination of descriptive statistics, have been used to illustrate the sample population, screening history and frequency and types of surgery. The major findings were consistent with the framework utilized for this study, the stress-illness linkage. In this examination of the effect that a stressor – presence of or history of IPV or child maltreatment – might have on a woman who has experienced such victimization, the work of Selye (1956, 1974) and others (Constantino et al, 2000; DeBellis, 2001; Heim et al, 2000; Kendall-Tackett,2000; Woods, Page, et al., 2005) enhances understanding of the health consequences that can occur as a result of victimization. Further explication of the variables and their interrelationships will guide future research and further development of interventions that will provide improved care and support for women who have survived adult and/or childhood victimization.

B. Discussion

Long Term Effects of Childhood Maltreatment and IPV on Adult Health

Experts agree that childhood maltreatment (including child sexual abuse, physical abuse and neglect, and emotional or psychological abuse and neglect) is associated with increased numbers of health care visits, hospitalizations, numbers of surgery for women, higher numbers of negative health effects and poorer physical and mental health in adulthood (Felitti et al., 1998; Finestone et al., 2000; Plichta and Falik, 2001; Walker et al., 1999). Intimate partner violence (IPV) is now acknowledged as a significant risk factor for poorer health, injuries, systemic disorders, and diseases among female patients including an increased number of hospital admissions, more pain and psychological distress, irritable bowel syndrome, stomach ulcers, indigestion, acute injury such as contusions, stabbings, and fractures, and more lifetime surgeries (Bullock & Schornstein, 1998; Coker, Smith, Bethea, et al., 2000; Drossman et al., 1990; Leserman et al., 1996; McKenzie et al., 1998).

In the present study, over half of the participants reported a history of child maltreatment, including emotional, physical, and sexual assaults and witnessing family violence. Over half of the sample scored positive for history of IPV. Nearly 40% of participants were survivors of both child maltreatment and IPV as an adult.

In the general health category, 17% of women in the “child abuse only” grouping rated their health as “fair or poor” and in the “IPV only” grouping, 16% of women rated their general health as “fair or poor.” When the cumulative effects of lifetime victimization were examined, nearly 40% of women who had survived both child abuse and IPV rated their general health as “fair or poor.” In the “nonabused” group, eight participants (19.5%) rated their general health as “fair or poor.”

The mean number of health care provider visits in the past year was fairly similar across all four groups; however, when hospitalizations in the past year were examined, 31% of women in Group C – history of both – had been hospitalized compared to 20% in the “child abuse only” grouping and 28% who had experienced “IPV only.” A statistically significant difference was not found.

Findings in this study were not always at the level of significance. This may be due to the relatively small sample size, which was particularly an issue when the sample was broken down into the four victimization groups. The power also decreased when the types of surgery experienced were grouped according to surgeries of a similar nature (ie abdominal, breast, etc.). For example, in a closer examination of the means and number of surgeries by types, several groupings had small sample sizes (for example an “n” of one, two, or three).

Verbal Response of Subjects Compared to Total CTS2 Scores: Groups E and F

Women with Positive IPV Self Report and Negative CTS2

Of the 49 women who acknowledged a history of physical IPV when asked, two women were noted to have a negative CTS2 score. Upon closer examination of their intake sheets I found that both women had experienced extreme emotional cruelty from a partner even though they had not been physically injured. One woman was a 61 year old white non-Hispanic woman scheduled for a parathyroidectomy. She was divorced, and had two children (38 and 32 years of age) who did not live with her. Her household income was between 10 and 20 thousand dollars annually: she was a graduate of a diploma program in nursing.

This participant compared her health to other women her age as “good.” She saw a health care provider three or four times during the previous year but had not been hospitalized. She had six previous surgeries, bilateral hip replacements, a hysterectomy, hemicolecotomy, rectal fistula,

and tonsillectomy (5 major and 1 minor). She was not screened for history of abuse at the time of her prior surgery in 2003, but thinks it would have been a good thing to do.

“I wish someone had asked, but I worked there.... Someone did ask (the question) in PAT last week. I think you need the physical presence of someone to ask questions – not just a written form.” This participant was in one previous relationship where IPV occurred and was married to that person for 12 years.

It was extreme emotional cruelty – I never told anyone. My husband was a police officer with an attitude. I was isolated and lost all of my friends. I was young and inexperienced and had no self confidence. There was a loss of physical intimacy in my life. The *absence* of intimacy was difficult to talk about.

Responses to the CTS2 revealed that this woman had been insulted or sworn at, called fat or ugly, had something destroyed that belonged to her, been shouted or yelled at, and her husband had stomped out of the room or house or yard during a disagreement and did something to spite her. This all occurred “over a year ago.” She also acknowledged a history of child maltreatment. This subject was stalked by a stranger as a child – not physically attacked – but was emotionally abused by a caretaker or parent at the age of five years.

Particularly painful memories she shared were related to the many times her husband “withheld sex.” She revealed this when asked questions on the “sexual coercion subscale” during completion of the Conflict Tactics Scale portion of the interview. She explained that at the time, she would have welcomed sexual contact, but he would only look at her in disgust and even when he had initiated physical “intimacy,” he would eventually turn away in disgust. She acknowledged how worthless and undesirable she felt when this occurred.

This woman's CTS2 score was positive for psychological aggression only. Even though she had experienced extreme cruelty, she had never been physically hit or injured. Of particular interest are her total scores on the STAI: 31 (state) and 40 (trait). Her total state score was less than the mean for the total sample of women in the study (33.12); however, her total trait score was higher than the group average (34.29). Although she wasn't particularly anxious about the upcoming surgery, she is a woman who in general, tends to be anxious.

The second subject in this category was a 50 year old white non-Hispanic woman who was married, had two children ages 21 and 26 not living with her, and was scheduled for a lumpectomy and sentinel node biopsy. She was a college graduate with a bachelor's degree: her annual household income was on the high end, over \$75,000.

She compared her health to other women her age as "excellent." She saw a health care provider once last year and was not hospitalized. She had three previous surgeries (1 major and 2 minor) surgeries including an appendectomy as a child and the removal of an IUD and cervical cauterization as an adult. This woman was not screened for abuse at the time of her previous surgery but thinks it "would be a good thing to do." In fact, she had never been screened in a health care system for IPV.

This participant said "yes" when asked about history of IPV. She acknowledged that she has been the victim of verbal abuse. "He gets really angry and pushes my buttons. He is a bully." Her CTS2 revealed that her husband insulted or swore at her more than 20 times in the past year and destroyed something that belonged to her three to five times in the past year. She was involved in unwanted sexual contact with and sexually assaulted by a sibling when she was between the ages of nine and twelve.

Her CTS2 score was positive for psychological aggression only. Of interest is the result of her STAI. Her total state score was 56, yet her total trait score was 28. This indicates that she is well above the sample average STAI state score yet below the average trait score. She is extremely anxious about the upcoming surgery, yet in general, is not an anxious person.

The experience of the two participants described above reinforces the need to include questions that inquire about history of psychological aggression or emotional abuse. These women responded in the affirmative when asked about physical IPV, perhaps because their experiences were of a magnitude that led them to acknowledge history of physical abuse even when their experiences were not physical in nature. A screening question that asks about physical injury or sexual assault only would have not identified these women as victims of abuse. When screening for IPV, one must be sure to consider the specific issue of emotional maltreatment – if not, women who are victims of psychological aggression may not be appropriately identified, which could ultimately delay appropriate support or intervention.

*Women with Negative IPV Self Report but Positive CTS2 Scores in Three Subscales
(Physical Assault, Sexual Coercion, and Injury)*

I found it interesting that two women who denied any history of physical IPV would in fact receive such a high score upon completion of the Conflict Tactics Scale. For example, one woman was 47 years old, white, non-Hispanic and was not married but lived in a committed relationship with a partner. She did not reveal information about previous relationships which would have been interesting as it cannot be determined from the data whether or not the experiences she had over a year ago are from the present or previous relationships. She received a high school diploma, had no children, and her household income was between \$10,000 and \$20,000 annually.

Upon reexamination of the intake sheet of this participant, I found that when comparing her health to other women her age, she said it was “fair.” She saw a health care provider five or more times last year but was not hospitalized. She had four previous surgeries (two major, two minor) including a tonsillectomy as a child, a D&C at 19 years of age, an angiogram at 47 years and gastric bypass surgery five years ago. For her upcoming surgery, she had been scheduled for a cholecystectomy.

This participant recalled being screened at the time of her previous surgery and admitted that she “thought it was a good thing to do.” She had also been screened several times in the emergency department of a community hospital where she receives her general health care. When asked, she denied a history of physical IPV.

Upon closer examination of her CTS2 results, I found that over a year ago, this woman was insulted or sworn at and called fat or ugly by her partner. Over a year ago, she went to a doctor because of a fight with her partner, her partner threw something at her that could hurt, and used force (like hitting, holding down, or using a weapon) to make her have sex. In the past year, her partner shouted or yelled at her three to five times and slammed her against a wall once.

Her history of child maltreatment was extensive. Between the ages of five and fourteen she was sexually assaulted by a stranger and physically attacked, sexually assaulted or molested and involved in unwanted sexual contact with a caretaker or parent. She acknowledged physical and emotional abuse by a caretaker or parent since the age of six. This participant scored positive on each of the four subscales on the CTS2.

Her scores on the STAI were 56 (state) and 70 (trait) which are much higher than the average STAI scores of the study participants. The scores indicate that she was very anxious about the upcoming surgery and in fact, tends to be an anxious person.

Perusal of the intake record of the next participant indicated that she was a single, 30 year old (considerably younger than the average age of participants) non-Hispanic white woman with no children. She had attended some college after high school and her average household income was approximately \$20,000 to \$35,000 annually. In comparing her health to other women her age, she described it as “fair.” She had seen a health care provider five or more times in the previous year and had been hospitalized once due to symptoms she experienced from a “stroke.”

Her only previous surgery was oral surgery at the age of 18. At the time of that surgery, she was not screened for IPV. When asked how she thinks she might have felt about being screened at that time, she stated that she felt “indifferent” about it. She did mention that she was screened within the past year during a visit to the emergency department (ED). This woman did not acknowledge a history of physical IPV when asked the question during the interview. She also indicated that she experienced no maltreatment as a child, but had been sexually assaulted at the age of nineteen.

In reviewing the CTS2 scores of this participant, I found that in the past year, she had not experienced any of the items on the scale. However, over a year ago this woman had a sprain, bruise, or small cut because of a fight with a partner, her partner had twisted her arm or hair, had pushed or shoved her and used force (like hitting, holding down, or using a weapon) to make her have oral or anal sex. Her partner had shouted or yelled at her, slammed her against a wall and had grabbed her and used force (like hitting, holding down, or using a weapon) to make her have sex. She admitted to feeling physical pain that still hurt the next day because of a fight with her partner. Interestingly, this participant received a positive score on three of the four CTS2 subscales: her score on the psychological aggression subscale was negative. Additionally, STAI

scores were not elevated. Her state anxiety score was 25, much lower than the mean score for the entire sample and trait score was 32, slightly less than the average for the entire group.

For the two women described above, specific questioning about physical IPV did not render a positive response. Perhaps the question was not clearly heard or completely understood by the respondents. Another possibility, however, is that the experiences they encountered at the hands of an intimate partner were not viewed by them as abusive. If a person has lived with violence in their lives, it stands to reason that certain actions perpetrated against them may be seen as “normal” rather than something that should not be tolerated (Zink et al., 2004).

Although specific questioning about history of abuse took place during the interview, the 47 year old woman described above had experienced sexual coercion, as well as physical assault and injury. She had been yelled at and called hurtful names and yet this woman did not identify as a victim of IPV. Her history of maltreatment as a child is extensive. Perhaps given her life experiences, she is unable at the present time to recognize or define “abuse” in her own relationships (Zink et al., 2004).

Similarly, the 30 year old participant described above had experienced a great deal of physical and mental cruelty and yet, did not identify herself as a victim of IPV. Even though this woman did not acknowledge a history of child maltreatment, she had been a victim of sexual assault by a stranger as well as the recipient of many cruelties perpetrated by a partner. Her ability to view her experiences as anything other than the “way it is in a relationship” may be limited (Zink et al., 2004).

The life experiences of the women outlined above support the need for education, early intervention and prevention. Coker (2005) has addressed the importance of primary and secondary prevention in health care settings. Victims of abuse, as seen in the life experiences of

some of the women described above, may not view their situation or experiences as “abusive.” In fact, many times women blame themselves for the violence. Perhaps this is due in part to the way society has addressed the issue of intimate partner violence-particularly toward female victims.

According to Coker (2005), primary prevention is needed for long term change to occur. This includes speaking out against inequality in relationships and power and control over an intimate partner. Additionally, health care providers must be willing to educate their patients in the dynamics of healthy relationships as well as support and role model intimate and family relationships in which health and safety are promoted.

In order for secondary prevention to occur, early identification and screening for the presence of disease in general will ultimately enhance care. This is true when addressing intimate partner violence and the effect its presence in a relationship can have on the health of victims. For the most part, women – and in particular battered women – support the need for screening for IPV in clinical settings. In fact, most of the women in this study supported the practice of provider screening for IPV in health care settings. Because the presence of IPV in the lives of patients is not always easily identified, universal screening for *both* physical and psychological abuse is necessary for early identification, appropriate referral to community resources, and ultimately patient and family health and safety.

Comparison to Previous Study (Hastings & Kaufman Kantor, 2003)

In their previous study of the relevance of past childhood maltreatment and/or IPV in adulthood to women’s current health status, Hastings and Kaufman Kantor (2003) examined clinical intake data of 57 adult females patients in a primary care practice who self identified as having a history of childhood maltreatment and/or IPV as an adult. Frequency data on abuse history of the women in this sample showed that 27 women (nearly half of the abused group)

reported childhood sexual or physical abuse, 20 women (slightly over one third) acknowledged a history of domestic abuse only and 10 women (approximately 18%) had experienced both child and domestic abuse. Further analysis found that women who experienced either IPV or both IPV and child maltreatment over the life course were significantly more likely to report a greater number of illness related symptoms than those who had experienced no abuse. Women who had experienced both IPV and child maltreatment had more hospitalizations than women with no history of abuse but not to a significant degree.

Women who identified as survivors of victimization either as children or adults were significantly more likely to have undergone any surgery than those who had not experienced abuse. Further, battered women were significantly more likely to have experienced major surgery than those who had not experienced abuse. In fact, women who had experienced IPV in adulthood were twice as likely to undergo major surgery as women who identified no abuse. Specifically, the presence of victimization history appeared to include significantly more major surgical interventions, especially surgery of an exploratory nature.

In the present study of 156 women, participants who acknowledged history of abuse included the following: a total of 90 women experienced child maltreatment – 29 (18.6%) women acknowledged a history of childhood maltreatment only; 86 women had experienced IPV: 25 women (16%) were survivors of IPV only, and 61 women (nearly 40%) had experienced both childhood maltreatment and IPV as an adult. Forty one women (26.3%) scored negatively for history of abuse.

The number of women with history of both IPV and child maltreatment – the cumulative effect of lifetime violence – was much greater in the present study. This higher number of

women may be due to the larger sample size and the fact that information was obtained through the use of valid and reliable instruments created specifically for the purpose of research.

In the previous study, Hastings and Kaufman Kantor (2003) noted that the tool used to elicit client information was designed for use in clinical practice and was not intended as a research instrument. In that study, information was obtained from medical records in a physician's private medical practice. The two questions about history of abuse were part of a questionnaire designed to obtain an overview of patients' health history and had been created to provide information about patients' history of victimization. Additionally, the two questions used to ask about presence of victimization included the term "abuse" only and did not offer a more specific description of specific acts or experiences.

It has been suggested that the term "abuse" not be used during screening or assessment of individuals as the term has various meanings for different people. Because of one's life experiences and the frequency with which they may have experienced certain acts of violence, a victim may not consider her experiences as abusive even though the seriousness of the act may have in actuality been life threatening (Zink et al., 2004).

Anxiety

In the previous study, Hastings and Kaufman Kantor (2003) looked at participant responses to inquiry related to patient perception of history of physical and mental health systems including "anxiety" ("Have you noticed any of the following: depression, anxiety or nervousness...?") Although findings related to anxiety were not significant, the direction of the findings supported the hypothesis of the researchers that cumulative effects of victimization are associated with levels of anxiety.

In the present study, I had hoped to learn more about the relationship between state (preoperative) and trait anxiety in women who were scheduled for surgery. During examination of the mean STAI scores according to history of victimization (Groups A, B, C, and D), a significant difference in state anxiety scores was not found. When trait anxiety was examined in the four groupings, there was a significant difference in the mean scores of subjects in Group C and Group D. Women who were victims of both child maltreatment and IPV had significantly higher trait anxiety than women who had never experienced personal victimization.

When I examined the groupings of women who when asked, acknowledged a history of physical IPV (Group E) and women who when asked, denied a history of physical IPV (Group F), I found that women assigned to Group E had significantly higher state anxiety than women assigned to Group F ($p=.02$). The mean trait anxiety scores of women in Group E when compared to women in Group F approached significance ($p=.065$).

In the present study, participants were not interviewed at standardized times either before or after surgery. Rather, the interviews were completed at times that were convenient for the participants or for example, when the researcher was successful in finding a potential subject at home with time to complete the interview. A standardized interview time prior to surgery (for example, interviewing all women in the study on the day before the scheduled surgery) would allow for more accurate comparisons of state anxiety in women who are scheduled for surgery.

Summary of Qualitative Data Findings

Satisfaction

When asked to describe their recent personal experience as patients in perioperative services, most participants responded with a common theme of contentment, comfort, and appreciation of the nursing support that had been offered. In describing the nursing care,

informants used words such as “awesome,” “great,” “courteous,” “warm and welcoming – not too clinical,” “wonderful,” “supportive” and “gentle.” Participants commented that the nurses “made me feel calm.”

Several of the women interviewed commented on the “good explanations” that were given by the nursing staff: one participant acknowledged that this was helpful as she “was really scared.” Another participant commented that she found the experience to be a “positive and relaxing” one and noted that “everything was ready” when she arrived in the operating room. Order and organization in the clinical setting was noted to be of great importance to several of the subjects.

One participant appreciated being permitted to “take my pet rock into the OR with me.” This woman also mentioned that she was encouraged to “listen to taped music which helped to relax me.” Other positive comments included that the nurses “helped me to feel more confident,” “supported me and I felt cared about,” and helped me to feel “respected – like an individual.” Individualized care was of great importance to most of the respondents.

Dissatisfaction

Participants shared several negative experiences that they encountered either during their stay in perioperative services or during their inpatient hospitalization. Informant number one shared that she was “upset that my dad couldn’t visit me in the recovery room.” She mentioned that while she was a patient in the post anesthesia care unit (PACU) a visit from her dad would have relaxed her.

Another negative incident that this woman experienced was during her day of discharge from the inpatient unit. She mentioned that “a male nurse had been assigned to me and he was

not supportive. He kept trying to get me out so they could make up the room for the next patient. I ended up having a panic attack.”

Informant number 2, who had undergone a cystocele repair, acknowledged that the pain she experienced post operatively brought back memories of the childhood sexual abuse she had experienced. This is not an uncommon response for women who have a history of child or adult sexual assault (Kitzinger, 1990). This woman stated that she was “able to separate it” and the fact that the nursing staff was “warm and not too clinical” was helpful. She also mentioned that during her ride home from the hospital, she experienced some perineal swelling and upon her arrival at home, realized that she was unable to catheterize herself as she had been taught to do in the hospital. Although not a criticism of her health care or health care providers, this was still an upsetting event for her.

Informant Number 4 explained that this surgery and following hospitalization were for her, negative. One of her chief complaints was her inability to bond with the nurses which she blamed on the fact that they were too busy and “stretched too thin.” She described a chaotic setting where “nurses’ assignments kept switching.” She felt that the nurses on the inpatient unit were “unprepared” to care for her needs and that she “felt forgotten.” This respondent was the only woman who, when asked for suggestions that might have improved the nursing care she received, recommended that nurses spend more time “caring for patients so bonding can occur.”

C. Recommendations

The purpose of the following discussion is to explore the implications of this study for its relation to clinical practice, nursing knowledge, and research.

Qualitative Inquiry

Because I was interested in learning more about the personal experience of women in currently abusive relationships, eight women who had expressed the presence of or issues related to ongoing violence in their current relationship were contacted postoperatively. During the brief phone conversation, I asked the following two questions of each woman. (“How would you describe your experience as a client in perioperative services? Can you suggest ways that nursing care in perioperative services might be improved to better meet your needs?”)

In evaluating the information that was shared during the post operative conversations, I found that the data obtained were limited. This could have been related to several factors. There had been no opportunity to establish a rapport with the informants. Previous contact had only taken place one time prior to the follow up call and during that interview there had been little opportunity to develop the relationship more fully. Questions had already been prepared and were asked of every participant who received a follow up call. Again, interviews were completed over the telephone rather than in person or in a setting more comfortable to the informant.

Conversation that allowed the dialogue to flow without predetermination of content or questioning may have produced richer data: data that may have proved to be more relevant to the phenomenon being studied. Dialogue with women who have survived victimization – hearing and learning about their “lived experience” of seeking intervention, help, or support from within the health care system – is one way that researchers can learn about the type of intervention and effectiveness of interventions that are currently being provided. Inquiry, during which a researcher gains information about the “meaning” of an experience and describes that experience in the words of an informant, is one way that researchers can share with others the true “essence” of the experience (Morse and Field, 1995).

In the present study, this was accomplished on a limited basis. Although women were free to share their thoughts and experience with the researcher, the questions used to complete the interviews with subjects were for the most part, scripted and prepared prior to the start of data collection. Future study based on qualitative inquiry could enhance the current body of literature and support improvements in practice by allowing the respondent and the researcher an opportunity to jointly commit to describing the experiences under study. Specifically, phenomenology may enhance the reader's understanding. Insight on the part of the researcher will be appropriately communicated in the words of the informant and through description of her "lived experience."

Implications for Nursing Practice

All adult female patients should be screened for IPV (Coker, 2005). Because of the relationship between history of victimization, presence of PTSD, and immune status, Woods, Wineman, et al. (2005) support "holistic" assessment of all women who present for care. According to these authors, women who present with a variety of vague physical complaints may have a history of abuse, PTSD, and possibly, a compromised immune system. Presence of this symptomatology requires appropriate nursing identification and intervention.

Very few women interviewed for the present study voiced their objection to the practice. A variety of IPV screening methods have been studied. McFarlane, Groff, O'Brien and Watson (2006) studied 360 women between the ages of 18 and 45 who had acknowledged physical or sexual abuse in the previous year. All participants in the study were assessed for abuse and were provided with a wallet sized referral card that provided information on services available through the local women's crisis center such as safe shelter, legal assistance and counseling. A subset of the population also received a 20 minute session with a registered nurse trained in

empowerment-based interventions with battered women, such as the development of a safety plan.

They found that in a 24 month period of time, women from both groups utilized significantly more safety behaviors than had been utilized prior to the use of either intervention. In addition, when measured at 12 and 24 months, they noted a significant decrease in IPV for all women in the study regardless of which intervention was utilized. According to McFarlane et al. (2006), the act of assessing for IPV and offering either method of appropriate referral information is enough to prevent ongoing IPV.

In order to acknowledge an appropriate health care provider response to victims of IPV, Dienemann et al. (2005) identified interventions that battered women agreed were the most valuable. Women in this study were in agreement with others in their support of health care provider screening for IPV. For this qualitative study, a total of 26 battered women met in one of five focus groups to discuss the responses they found most helpful when disclosing the presence of IPV in their lives. Seven of the most therapeutic responses on the part of the health care provider during the provider-client interaction were identified including:

- 1) Being treated with respect and concern.
- 2) Protection.
- 3) Complete documentation of events including photographs when appropriate.
- 4) Giving control to the victim – not telling them what to do.
- 5) Immediate support and nonjudgmental responses.
- 6) Providing options for resources.
- 7) Being there for the victim. A return to the clinical setting should always be welcome whether or not they choose to stay in the battering relationship.

In today's busy health care environment, health care professionals have limited time with individual patients. Screening for IPV could be time consuming but is necessary in order for identification and adequate assessment to occur. Additionally, prevention of injury – or further injury – is important (Coker, 2005).

In an effort to encourage screening for IPV in primary care settings, McNutt et al. (2005) developed a computerized screening program. The computer program was created to enhance patient care and safety by offering a method of screening that is not time consuming and can be more focused on individual health histories and patient needs in general. A computerized health history including questions related to screening for acute and chronic health issues in addition to IPV provides an efficient tool that would be completed by the patient in the safety of the office setting. Personal health history would be included in the several preventive screening questions that would be asked of patients. Screening questions could be created to address IPV issues from a broad perspective, that is, to include history of emotional or psychological abuse as well as physical or sexual abuse. Effectiveness of the tool is currently being studied.

Gerber, Leiter, Hermann, and Bor (2005) looked at a possible solution to the perceived time consuming nature of screening for abuse and the lack of confidence or competency health care providers experience in working with victims of IPV. In their study they examined mandatory screening for IPV being completed in a health care provider waiting room setting. Subsequent reporting of the screening was made available to the health care provider.

These researchers found that this method of screening did not result in a high level of referral or safety planning by the physicians and nurse practitioners at the urban health center where this small study took place. Nearly one third of the charts of those patients who screened positive for IPV did not include appropriate documentation when a patient screened positive for

abuse. Additionally, there was a lack of documentation of information related to subsequent referral or creation of safety plan for victims. It is unknown whether or not appropriate intervention was actually offered to the victims, only that documentation of intervention was lacking.

Physicians (n=40) and nurse practitioners (n= 19) who participated in the survey agreed that although they believe it is their role to screen for IPV, many still lack confidence in their ability to offer appropriate intervention. They acknowledged that recent training in the dynamics of IPV along with the clinical experiences they have had working with patients with a known history of IPV have helped over time to enhance their confidence in working with victims of IPV.

Nursing Education

In order for screening for abuse to be effective – and safe – nurses and others must be properly trained to offer an appropriate intervention plan (Carlson and McNutt, 1998; Cox, 2003). Education of nurses is essential and should include content related to the dynamics of IPV, appropriate response to acknowledgement of IPV history, intervention, and safe and effective documentation for all staff members working in areas where screening for IPV occurs. Adequate education and training is a necessity in order to enhance optimum safety to victims and staff members working in areas where screening for IPV occurs.

Because the effect that history of victimization has on women's general health is profound, nurses in all clinical settings – including perioperative services – should take the time to ask the questions and know appropriate responses/interventions. Many participants in the present study noted that their first or only screening for abuse had occurred during the pre

operative interview/screening in the pre admission testing unit (PAT), a clinical area within surgical services at the medical center at which this study was conducted.

A common theme from respondents who participated in the qualitative component of this study was the support and individualized care and concern from nurses in the Same Day Program (SDP). These nurses, who are often the first to greet perioperative patients and in many cases, the last to see them prior to discharge from the facility, are in a position to offer information, resources, and nonjudgmental support and intervention to women who are struggling with ongoing issues or history of past victimization.

JCAHO

The Joint Commission on the Accreditation of Health Care Organizations (JCAHO) is a private organization that is committed to maintaining and improving the quality of health care in facilities throughout the United States. JCAHO accreditation of health care facilities, which includes but is not limited to acute care hospitals, is considered a mark of excellence of the health care provided by the facility and of the providers who practice in that setting.

In 2004, JCAHO, in order to enhance access of and appropriate care to victims of domestic and sexual violence, addressed the issue of domestic violence as a health care issue. Hospitals seeking accreditation through JCAHO are now required to develop appropriate guidelines to oversee the care of this patient population. Elements of care that facilities are accountable for include that providers in the organization be competent in the identification of victims in the clinical setting and that staff members are appropriately educated in issues related to domestic violence.

According to JCAHO's mandate, education of health care providers should include content on the dynamics of abuse as well as current information on how and where to

appropriately refer victims for further support in the community. Staff should be competent in offering safe assessment and intervention which includes screening for history of domestic and sexual abuse (Family Violence Prevention Fund, 2002; Joint Commission on Accreditation of Healthcare Organizations, 2005).

Future Research

Survivors of IPV: Analysis of CTS2 Scores Versus Self Acknowledged Abuse

Over half of the participants in this study of 156 women (n= 86) received a positive score on the CTS2 scale including 45 women (nearly 30%) who scored positively on the physical injury scale, 65 (approximately 40%) who scored positively on the physical assault scale and 33 women (over 20%) who scored positively on the sexual coercion subscale. Nearly 50% of women in the study (n=73) received a positive score for psychological aggression; 17 had a positive score on the psychological aggression subscale only. It is of interest to note that only 49 women (31%) acknowledged having a personal history of IPV when directly asked the question as part of the initial interview.

The only question used during the interview to elicit history of IPV (“In *any* of your intimate relationships, did a partner *ever* beat, push, hit, slap, punch, or cut or do anything like that to you?”) refers to a history of physical violence only – there is no specific mention of psychological or sexual maltreatment in the question. The CTS2 on the other hand, the tool used to gain additional information about personal history of IPV, is a valid and reliable tool that addresses not only physical violence but the presence or history of psychological and sexual victimization. It is a popular instrument that takes relatively little time to complete (Straus et al., 1996).

In the initial question posed to study participants, the lack of reference to presence or history of emotional, psychological, or sexual victimization may be a major reason for this discrepancy. Countless studies address the role that a history of abuse, including emotional abuse, may have on long term physical health (Coker, 2005; Cox, 2003; Fulton, 2000; McNutt et al., 2002; Wagner & Mongan, 1998). Because many health consequences may be strongly related to emotional abuse, it is recommended that IPV screening in health care settings include questions referring to emotional or psychological and sexual as well as physical abuse (Carlson and McNutt, 1998).

In their study, Zink and colleagues (2004) looked at the issue of IPV in a sample of women over the age of 55 and found that physical abuse was identified in over 70% of the cases. However, they also learned that emotional or verbal abuse was acknowledged by more than 90% of the participants, social and economic control was identified in 68%, and sexual abuse was acknowledged in over 30% of the participants.

Asking about emotional abuse is often overlooked when screening or assessing for IPV. Experts agree that when asking about history of domestic violence or IPV it is crucial to include reference to emotional or psychological maltreatment as part of routine or universal screening (Carlson & McNutt, 1998; Family Violence Prevention Fund, 2002). In future research, along with the use of well tested instruments like the CTS2, direct questioning by the researcher that includes history of sexual and emotional abuse as well as physical abuse should be included. Doing so may improve overall findings related to history and prevalence of IPV – including nonphysical trauma such as that related to emotional or psychological abuse. In addition, further study in this area may allow researchers to better examine group differences between women with and without self acknowledged history of IPV in the population being studied.

Because of the high numbers of adults who have acknowledged a history of child maltreatment or abuse, researchers have suggested that along with routine screening for IPV, health care providers consider screening for history of child maltreatment or victimization (McNutt et al., 2002; Woods & Wineman, 2004). In a future study, it would be of interest to examine the practice of screening for history of child maltreatment to determine if such screening would be an effective tool for improving intervention and outcomes for patients with history of child victimization.

Participant Recruitment

One ongoing challenge during the present study was related to participant recruitment. At the study site, large numbers of patients are treated annually in the surgical clinics. As a major referral center within the geographic area it serves, the Medical Center provides services to over 350,000 patients annually in the clinic setting as a whole. The majority of surgeries that take place in perioperative services are scheduled through one of the surgical clinics and approximately 30,000 patients receive care in perioperative services on an annual basis. Even though large volumes of patients are seen daily, several issues seem to have affected the overall success of the recruitment effort.

Initial introduction to the study was accomplished through the efforts of “surgical schedulers” in the clinics. The role of the surgical scheduler is an administrative or secretarial role: this person is responsible for scheduling surgery with appropriate staff in the operating room and providing necessary preoperative instructions related to date and time to patients. All patients interact with the surgical schedulers at the time they are booked for surgery. The access that the surgical schedulers have to preoperative patients was the main reason staff in this role were asked to help with participant recruitment.

Prior to participant enrollment, I met with surgical schedulers in the clinic settings on an individual basis to explain the role they would play in enrolling patients in the study. Two information sheets were provided: one to enhance staff understanding of the study (Appendix G.) and one for distribution to the patient to provide additional information about the study (Appendix H.). In order to enhance my availability to staff (and potential subjects), I was sure to have my contact information immediately available to them including my business cards, access to my pager number, and office extension at the hospital. Before meeting with these staff members, I was sure to have already received the support of their supervisors in the individual clinics.

As already explained, their role was to ask for permission for me to contact the patient at a time and phone number provided by them. Further explanation of the study and eventual informed consent would be completed by me either at the time of the phone call or at a mutually agreed upon time. All that was asked of the staff person was to receive permission for me to make that initial contact.

In the first month that the recruitment effort was underway, contact information for only 15 women had been received. At the beginning of the recruitment effort, clinics involved included the surgical, orthopedic and gynecology clinics, all of which see large numbers of female patients. The addition of the “plastics” clinic did little to increase the numbers of possible participants. I learned that the surgical schedulers in the clinics were not routinely asking patients for permission for me to contact them due to their heavy work load, which often prevented them from making my study a priority. In fact, the Orthopedics Clinic withdrew from the study and informed me that due to time constraints, they could no longer participate.

During the month of May of 2005 only four possible participants were recruited. A decision was made to add two additional clinics: the otolaryngology and oral surgery clinics. Still, participant interest remained low.

Addition of one more point of entry for subjects: the pre admission testing unit (PAT) was the major factor that resulted in successfully increasing the numbers of subjects interested in learning more about the study. I found that although PAT staff and Clinic staff had equal access to preoperative clients, one major difference between the two groups was noted: PAT staff who were involved in recruitment efforts was comprised entirely of registered nurses rather than administrative staff. Nurses seemed more interested in learning more about how this research and their involvement in this research could ultimately improve care for patients.

In meeting with the nurses to explain the goals and aim of the study and outlining their roles, I found that discussion regarding the importance of research in enhancing patient care that is based on evidence was helpful in piquing their interest in the study. Knowledge and awareness of “evidence based practice” is something that professional nurses now recognize as a means of providing patients with intervention and support that is grounded in research. The PAT nurses viewed their involvement as an opportunity to participate in an ongoing study that would add to their own knowledge base but would also enhance the literature in optimum care and support patients who are survivors of IPV or child maltreatment.

A larger sample size would have enhanced my ability to make more comparisons between the groups – especially during the analysis of the types of surgery experienced according to history of victimization. In a future study, I would suggest partnering early with nursing staff who have adequate contact with patients. In this study, after the nurses in PAT became involved in participant recruitment efforts, numbers of potential subjects increased from

four patients recruited in May of 2005 to nearly 40 new enrollees in June and another 40 in July of 2005.

Limitations of the Study

One major limitation of the study was the small sample size of women who identified ongoing IPV in their present relationship with a partner. Only eight women met the criteria required to receive a more in-depth phone call during the post operative phase of care. This may have been due to the method of interview (telephone) as opposed to an in-person interview process. Face to face dialogue may have enhanced the quality of the initial interview with the participant in part by providing opportunities for nonverbal communication that would have allowed the researcher the opportunity to convey feelings of support and understanding to the participant.

As suggested earlier, a more in depth in-person interview, and one more qualitative in nature, for example, a phenomenological study, may enhance the opportunity for respondents to share more specific or detailed descriptions of their experiences. Additionally, an in-person meeting held in a comfortable and safe setting, such as a private area in the hospital, a coffee shop or restaurant may better support the interview process.

As mentioned earlier, participants were not interviewed at standardized times either before or after surgery. Rather, the interviews were completed at times that were convenient for the participants or for example, when the researcher was successful in finding a potential subject at home with time to complete the interview. A standardized interview time prior to surgery (for example, interviewing all women in the study on the day before the scheduled surgery) would allow for more accurate comparisons of state anxiety in women who are scheduled for surgery.

Similarly, postoperative interviews were done at times that were most convenient for the participants or at times when the researcher was successful in reaching the subject via telephone. Thus, although I had hoped to complete the post operative interviews within a two week time period after the surgery had taken place, post operative interviews were done at a variety of times ranging from the day after surgery to three weeks into the postoperative period. One's memory of the surgical experience is likely to diminish as days go by and their recollections or memories of the perioperative experience fade.

This study depended on patients' memory of their health care experiences and particularly their surgical history. Patients could choose to withhold information that was uncomfortable to discuss, that created unpleasant memories, or experiences could have simply been forgotten over time. Permission to refer to health care records was not requested and so, records were not accessed at any point during the data collection process. Review of health care records of participants would have allowed the researcher to validate some of the health care experiences shared with the researcher such as numbers and types of surgery in the past and recent hospitalizations. In addition, screening history at the data collection site and appropriate documentation of history of IPV by a health care provider could have been more closely examined.

On several occasions during the telephone interviews, I found that it was difficult to assess whether or not the participant was really alone (no other adults present). At times, I could hear noise or voices in the background and wondered if it was a television or radio I could hear, or if in fact, someone else had entered the room. During my explanation of the study to the participants, I was sure to explain that for the study, it was best if they were alone at the time of the interview; however, even though the participants agreed to this at the time, there was no way

to confirm this once the interview had begun. When asked, the participant did indicate that they were alone in the room. Presence of another adult during the interview could have affected the responses of the participant particularly if they did have a history of victimization and felt uncomfortable discussing this in the presence of another or if the person represented a threat to their safety.

Conclusions

An association between a history of childhood maltreatment, and/or IPV and increased vulnerability to a range of mental health, physical health, personal, and social problems as adults – long after the abuse has occurred – is strongly supported in the literature (Campbell, 2002; Constantino et al., 2000; Finkelhor & Dzuiba-Leatherman, 1994; Heise et al., 1999; Heitkemper et al., 2001; Walker et al., 1999). Women with a history of abuse utilize health care services at significantly higher rates than women who have not experienced abuse (Bergman & Brismar, 1991; Coker, Smith, Bethea, et al., 2000; Koss et al., 1991; McCauley et al., 1995). My main interest in the present study was to more closely examine women's history of victimization as a child and/or IPV as an adult and the possible effects of that victimization history on surgical intervention experienced over the life course.

The study assessed the prevalence of histories of child maltreatment and IPV in a general population of women scheduled for an elective surgical procedure. Types of surgical procedures were identified. State and trait anxiety were measured. Eight women who identified ongoing IPV were interviewed postoperatively in order to further explore their "lived experience" of being a patient in perioperative services.

The goal of this study was to improve the care and support of female perioperative clients who struggle with the memory of childhood maltreatment or past or current IPV. Failure to

screen for IPV at this point of entry into the health care system represents a “missed opportunity” to provide services to women who may be in need. Findings will support perioperative registered nurses as they strive to provide research-based, individualized care to clients. Knowledge derived from this study will improve the nursing response to women with a history of victimization who present for care in the perioperative setting by informing registered nurses how to best address and meet the specific needs of battered women.

APPENDIXES

APPENDIX A

Participant Interview

Code Number: _____ Interviewer: _____ Date: _____

The first questions I would like to ask include basic facts about you. Please answer the following with the response that *best* describes you and your personal situation.

Section A: Demographics

1. How old are you? _____ years

2. Which of these ethnic groups do you consider yourself?

_____ White, non-Hispanic

_____ Black, non-Hispanic

_____ Hispanic

_____ Asian/Pacific Islander

_____ American Indian/Alaskan Native

_____ Other group, please specify _____

3. What is your current marital status?

_____ Single

_____ Living together, but not married

_____ Married

_____ Married, but live apart or separated

_____ Divorced

_____ Widowed

4a. How many children do you have living with you? _____

What are their ages (in years)? _____

4b. How many children do you have that do not live with you? _____

What are their ages (in years)? _____

5. How would you best categorize the income level of your household?

_____ Under \$10,000 annually

_____ \$10,000 - \$20,000 annually

_____ \$20,000 - \$35,000 annually

_____ \$35,000 - \$50,000 annually

_____ \$50,000 - \$75,000 annually

_____ Over \$75,000 annually

_____ Don't know or prefer not to share

6. What is the last year of school that you completed?

_____ Elementary school

_____ Junior high or middle school

- High school/GED
 Some college or education beyond high school
 College graduate: associates degree
 College graduate: bachelors degree
 Advanced degree
 Other, please describe _____

Health Status

Now I'm going to ask you a few questions about your health.

7a. Compared to other women your age, how would you rate your general health?

- Excellent
 Very good
 Good
 Fair
 Poor

7b. Overall, how many times did you see a health care provider about your own health in the past year (not including pre-natal or pregnancy-related care)?

- Never
 Once
 Twice
 Three or four times
 Five or more times

7c. In the past year, have you been hospitalized for any condition other than pregnancy or childbirth?

- Yes (go to 7d.)
 No

7d. If "Yes:" What was/were the reason(s) for the hospitalization(s)? _____

8a. Have you had any previous surgery?

- Yes (go to 8b.)
 No (go to 10a.)

8b. If "Yes:" How many surgeries have you had before this one (the surgery that is currently scheduled)? _____

8c. Can you tell me the types of surgery you have had and your age at the time (*or year*) of surgery?

1. _____

2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

9a. For your most recent surgery (*not the surgery that is currently scheduled*), were you screened (*did anyone ask you*) at any point about a history of intimate partner violence?

- _____ No (go to 9d.)
 _____ Yes (go to 9b.)
 _____ Don't remember

9b. If "Yes:" Where (*in what setting*) and when did the screening occur? _____

9c. Which statement best describes your feelings about the screening?

- _____ I thought it was a good thing to do.
 _____ I didn't like it.
 _____ I felt indifferent to it.
 _____ Other, please describe _____

9d. If "No:" Which statement best describes how you *think* you might have felt about being screened?

- _____ I think it would be a good thing to do.
 _____ I don't think I would like it.
 _____ I feel indifferent about it.
 _____ Other, please describe _____

10a. Have you *ever* been screened for a history of intimate partner violence when interacting within a health care system or with a health care practitioner (doctor, nurse)?

- _____ No (go to 11a.)
 _____ Yes (go to 10b.)
 _____ Don't remember

10b. If "Yes:" Where and when did this screening occur? _____

11a. In *any* of your intimate relationships, did a partner *ever* beat, push, hit, slap, punch, or cut or do anything like that to you?

- _____ No (go to Section B.)
 _____ Yes (go to 11b.)

11b. In how many relationships did this occur? _____

11c. What was the most serious act that ever occurred? _____

Section B: Revised Conflict Tactics Scale (CTS2)

Now I'm going to ask you about some behaviors that you may have experienced in a relationship with a partner. No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired, or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences. Please tell me how many times your partner did them in the past year. If your partner did not do one of these things in the past year, but it happened *before* that, then please tell me that also.

- 1 = Once in the past year
- 2 = Twice in the past year
- 3 = 3-5 times in the past year
- 4 = 6-10 times in the past year
- 5 = 11-20 times in the past year
- 6 = More than 20 times in the past year

BEFORE ONLY

- 7 = Not in the past year, but it did happen before

DO NOT READ

- 0 = This has never happened

How often did this happen?

1. My partner insulted or swore at me.	1	2	3	4	5	6	7	0
2. My partner threw something at me that could hurt.	1	2	3	4	5	6	7	0
3. My partner twisted my arm or hair.	1	2	3	4	5	6	7	0
4. I had a sprain, bruise, or small cut because of a fight with my partner.	1	2	3	4	5	6	7	0
5. My partner made me have sex without a condom.	1	2	3	4	5	6	7	0
6. My partner pushed or shoved me.	1	2	3	4	5	6	7	0
7. My partner used force (like hitting, holding down, or using a weapon) to make me have oral or anal sex.	1	2	3	4	5	6	7	0
8. My partner used a knife or gun on me.	1	2	3	4	5	6	7	0
9. I passed out from being hit on the head by my partner in a fight.	1	2	3	4	5	6	7	0
10. My partner called me fat or ugly.	1	2	3	4	5	6	7	0
11. My partner punched or hit me with something that could hurt.	1	2	3	4	5	6	7	0
12. My partner destroyed something belonging to me.	1	2	3	4	5	6	7	0
13. I went to a doctor because of a fight with my partner.	1	2	3	4	5	6	7	0
14. My partner choked me.	1	2	3	4	5	6	7	0
15. My partner shouted or yelled at me.	1	2	3	4	5	6	7	0
16. My partner slammed me against a wall.	1	2	3	4	5	6	7	0
17. I needed to see a doctor because of a fight with my partner, but I didn't.	1	2	3	4	5	6	7	0
18. My partner beat me up.	1	2	3	4	5	6	7	0
19. My partner grabbed me.	1	2	3	4	5	6	7	0
20. My partner used force (like hitting, holding down, or using a weapon) to make me have sex.	1	2	3	4	5	6	7	0
21. My partner stomped out of the room or house or yard during a disagreement.	1	2	3	4	5	6	7	0

22. My partner insisted on sex when I did not want to (but did not use physical force).	1	2	3	4	5	6	7	0
23. My partner slapped me.	1	2	3	4	5	6	7	0
24. I had a broken bone from a fight with my partner.	1	2	3	4	5	6	7	0
25. My partner used threats to make me have oral or anal sex.	1	2	3	4	5	6	7	0
26. My partner burned or scalded me on purpose.	1	2	3	4	5	6	7	0
27. My partner insisted I have oral or anal sex (but did not use physical force).	1	2	3	4	5	6	7	0
28. My partner accused me of being a lousy lover.	1	2	3	4	5	6	7	0
29. My partner did something to spite me.	1	2	3	4	5	6	7	0
30. My partner threatened to hit or throw something at me.	1	2	3	4	5	6	7	0
31. I felt physical pain that still hurt the next day because of a fight with my partner.	1	2	3	4	5	6	7	0
32. My partner kicked me.	1	2	3	4	5	6	7	0
33. My partner used threats to make me have sex.	1	2	3	4	5	6	7	0

Section C: State Trait Anxiety Inventory (STAI)

Now I'm going to read a number of statements which people have used to describe themselves. I will read each statement and then you tell me the appropriate value to indicate how you feel *right now*, that is, at *this moment*. There is no right or wrong answer. Just give the answer which seems to describe your *present* feelings best.

	<u>Not at all</u>	<u>Somewhat</u>	<u>Moderately so</u>	<u>Very much so</u>
1. I feel calm.	1	2	3	4
2. I feel secure.	1	2	3	4
3. I am tense.	1	2	3	4
4. I feel strained.	1	2	3	4
5. I feel at ease.	1	2	3	4
6. I feel upset.	1	2	3	4

7. I am presently worrying over possible misfortune.	1	2	3	4
8. I feel satisfied.	1	2	3	4
9. I feel frightened.	1	2	3	4
10. I feel comfortable.	1	2	3	4
11. I feel self-confident.	1	2	3	4
12. I feel nervous.	1	2	3	4
13. I am jittery.	1	2	3	4
14. I feel indecisive.	1	2	3	4
15. I am relaxed.	1	2	3	4
16. I feel content.	1	2	3	4
17. I am worried.	1	2	3	4
18. I feel confused.	1	2	3	4
19. I feel steady.	1	2	3	4
20. I feel pleasant.	1	2	3	4

Now, I'm going to read a number of statements which people have used to describe themselves. I will read each statement and then ask you the appropriate value to indicate how you *generally* feel. There are no right or wrong answers. Just give the answer that seems to describe how you *generally* feel.

	<u>Almost never</u>	<u>Sometimes</u>	<u>Often</u>	<u>Almost always</u>
21. I feel pleasant.	1	2	3	4
22. I feel nervous and restless.	1	2	3	4
23. I feel satisfied with myself.	1	2	3	4
24. I wish I could be as happy as others seem to be.	1	2	3	4
25. I feel like a failure.	1	2	3	4
26. I feel rested.	1	2	3	4
27. I am "calm, cool, and collected."	1	2	3	4
28. I feel that difficulties are piling up so that I cannot overcome them.	1	2	3	4
29. I worry too much over something that really doesn't matter.	1	2	3	4
30. I am happy.	1	2	3	4
31. I have disturbing thoughts.	1	2	3	4
32. I lack self-confidence.	1	2	3	4
33. I feel secure.	1	2	3	4
34. I make decisions easily.	1	2	3	4
35. I feel inadequate.	1	2	3	4
36. I am content.	1	2	3	4

37. Some unimportant thought runs through my mind and bothers me.	1	2	3	4
38. I take disappointments so keenly that I can't put them out of my mind.	1	2	3	4
39. I am a steady person.	1	2	3	4
40. I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4

Section D: Child Maltreatment Index (CMI)

Now I'd like to ask you some questions about the family you grew up with. I am going to read a list of events, which sometimes bring about change in your life. Please tell me if this event ever happened to you *before the age of eighteen*.

(If the respondent says "Yes," ask at what age this occurred. If it is impossible for her to give an age, record an age range.)

1. WERE YOU EVER:	YES	NO	AGE (in years)
a. Physically attacked by a stranger?			
b. Physically attacked by a caretaker/parent?			
c. Sexually assaulted by a stranger?			
d. Sexually assaulted/molested by a caretaker/parent?			
e. Involved in unwanted sexual contact with a caretaker/parent?			

DID THE FOLLOWING EVER HAPPEN TO YOU?

f. Were you physically abused by a caretaker/parent?			
g. Were you emotionally abused by a caretaker/parent?			

2. As a child, how many times did you see a family member strike, beat, hit or seriously injure another family member (other than spanking with an open hand)?

- ___ Not at all
- ___ 1 or 2 times
- ___ 3 – 9 times
- ___ 10 – 25 times
- ___ 25 times or more

Thank you. We have reached the end of the study. *(If participant has acknowledged ongoing IPV, go to Section E. If no ongoing IPV, skip to closing statements.)*

Section E: Current Intimate Partner Violence (IPV)

May I phone you one more time within two weeks after your surgery? I will be asking two questions related to this surgical experience. The interview should last no longer than ten minutes.

_____ No

_____ Yes (If “Yes,” “What is the best day and time to reach you?”)

- Monday _____ am/pm
- Tuesday _____ am/pm
- Wednesday _____ am/pm
- Thursday _____ am/pm
- Friday _____ am/pm
- Saturday _____ am/pm
- Sunday _____ am/pm

Closing Statements

Thank you for participating in this study. I realize that some of the content in this interview may have been upsetting to you. If you would like information about community resources that are available to help and support women who have experienced victimization in their lives, I can provide that to you at this time. *(Have flyers and phone numbers available from WISE and from Psych Services for resident on-call.)*

Do you have any other questions or concerns?

(Remind participant to contact researcher: Deb Hastings, 603-524-5995 or 603-650-5937 should any questions arise.)

APPENDIX B

Post Surgery Survey Questions

Code number _____

Number of days post-op _____

Women, who during the initial data collection acknowledge ongoing IPV in their current relationship, will be contacted within the first two weeks after surgery to examine the following two research questions:

- How would you describe your experience as a client in perioperative services? (*Document themes, quotes when possible.*)
- Can you suggest ways that nursing care in perioperative services might be improved to better meet your needs? (*Document themes, direct quotation when possible.*)

Script:

Good morning, Ms. XXX: This is Deb Hastings, and I'm calling about the research study you agreed to participate in. You had agreed to talk with me one time within one to two weeks after your surgery. If you are still willing and this is still a good time for you, I have just two questions to ask you regarding your recent surgery. Are you alone right now and able to talk for 10 – 15 minutes?

- a) If “no:” When would be a better time for us to talk/meet? *Preferred call/meeting time:* _____

Thank you, I'll call back/we will meet at that time. (*Determine meeting place at Medical Center*).

- b) If “yes:” OK, let's get started. Here's my first question:

1. How would you describe your personal experience as a recent patient in surgical (*or perioperative*) services?
2. Can you suggest ways that the nursing care you received while you were a patient in surgical services might be improved to better meet your current needs?

THANK YOU FOR YOUR HELP WITH THIS STUDY!

APPENDIX C

Consent to Participate in Research

*Dartmouth-Hitchcock Medical Center, Lebanon, NH
Duquesne University, Pittsburgh, PA*

The Effects of Women's Health and Life Experiences on Surgical Intervention:

Thank you for your interest in participating in this research study. Your participation is voluntary. Your decision whether or not to participate will have no effect on the quality of your health care. You may withdraw from the study at any time. Please feel free to ask the researcher anything that you do not understand about your participation in the study.

What is the purpose of this study?

The purpose of the study is to explore the relationship between women's health, personal life experiences, and response to surgery. The study will also examine ways that nurses can be more supportive of women who are scheduled to undergo surgery.

Please be aware that your responses will be used for research purposes only. Your health care team will not be informed of these responses.

What does the study involve?

- You will be interviewed today after you provide consent for the interview, or at a time and phone number that is agreeable to you.
- You would be required to give verbal consent prior to the interview. It is preferable if you are alone at the time of the interview.
- Your participation in the study will last approximately 45 minutes.
- You may choose to stop your participation in the study at any time.
- You will be asked several personal questions such as your marital status, number and ages of your children, and the education level you have completed. You will then be asked about some of your life experiences including: numbers and types of surgeries you have had, your general health, how you tend to react or respond in certain situations, present and past relationships with significant others, and experiences you may have had as a child that in your opinion were unsafe, or may or may not have made you feel uncomfortable.
- You may be asked for permission to interview you within one to two weeks after your upcoming surgery to ask two questions about your surgical experience and your personal feelings about the care you received.
 - Your responses to the post operative interview would be obtained either in person (perhaps in conjunction with a post-operative clinic visit) or via the telephone at a time that is most convenient for you.

- Your responses will be recorded by the researcher.
- When we have information from all of our participants, the comments that have been shared will be outlined and summarized.

What are the benefits of participating in this study?

You may not personally benefit from being in this research study. We hope to gather information that may help people in the future.

What are the risks of participating in the study?

For a small number of women, participation in this study may create emotional distress among those whose lives have been touched by conflict within their family or problems within a relationship with a partner or significant other. If you experience emotional difficulty at any point in this interview or after the interview, or fear for your safety because of a current relationship, you will be helped to find support that would be appropriate for your needs.

Will people find out that I am participating in the study?

- Every effort will be taken to protect your confidentiality; however, research records, just like hospital records, may be subpoenaed by court order.
 - Your name and phone number has been used only to allow me to speak with you today.
 - The answers you provide during the interview will be recorded on a separate sheet with an assigned code number. At the conclusion of this interview, the completed survey will be filed by me in a locked cabinet to which only the researcher has access.
 - If you are asked for permission to be recontacted for an additional interview during the first two weeks after your surgery, your contact information (name and phone number) will be obtained today.
 - There will be no link between your name and any of the information you provide. Names of participants will not be shared at any point during the research process or in the publication of the research.
-
- All other data gathered during this study will be maintained for as long as required by federal or state regulations. Research information that may be shared with faculty from the researcher's doctoral program at Duquesne University or members of her advisory committee will not contain any names or identifying information. The interview information will not be shared with your doctor.

Other important things you might want to know:

- In the unlikely event that you report to me that your child is at risk for immediate harm, then I might have to talk with an appropriate state agency to see if there is any need to protect your child.

Costs or payments: There is no cost to you if you agree to participate in the study. You will receive no compensation if you agree to participate.

Number of participants: We expect to interview two hundred and fifty women who are scheduled for surgery at DHMC.

Funding: The researcher is a doctoral student in nursing at Duquesne University in Pittsburgh, PA and the present study will fulfill a requirement for graduation from the program. The researcher is also a clinical nurse specialist in perioperative services at DHMC. This study is a separate undertaking from her position at DHMC: it is not conducted as part of her job at the hospital.

The researcher has received \$500.00 from Epsilon Tau Chapter, Sigma Theta Tau International – a nursing honor society in which she hold membership – to help support the study.

Who should you call if you have questions about the study?

Questions about this study may be directed to:

1. Debra Hastings, RN: (603) 650-5937 or (603) 524-5995.
2. Dr. L. Kathleen Sekula, Researcher’s faculty advisor at Duquesne University: (412) 396-4865.
3. Dr. Paul Richer, Chair of the Duquesne University Institutional Review Board: (412) 396-6326.
4. Dr. Glenda Kaufman Kantor, another advisor in this project: (603) 862-2830.

If you have general questions about being a research participant, you may call the Office of the Committee for the Protection of Human Subjects at Dartmouth College at (603) 646-3053 during normal business hours.

VOLUNTARY CONSENT: I have been read the information about this study. I have been given an opportunity to ask questions, and I understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent at any time, for any reason. On these terms, I certify that I agree to participate in this study.

Participant’s Signature

Date

Researcher’s (or Assistant’s) Signature

Date

If consent is obtained via telephone, this should be so noted on “page one” of the participant interview sheet.

APPENDIX D

Contact Sheet for Research ParticipationWomen Scheduled for Elective Surgery – Permission to Contact

NAME	PHONE	BEST TIME TO CALL
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
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<u>25</u>		

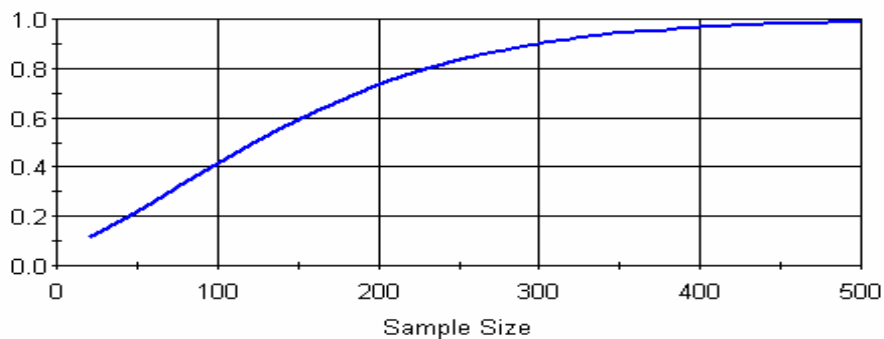
THANK YOU!

APPENDIX E

Permission for Use of Instruments

1. CTS2. Verbal permission received from Murray A. Straus, Professor of Sociology & Co-Director, Family Research Laboratory, University of New Hampshire.
2. STAI. Permission to reproduce up to 200 copies for one year starting from April 12, 2002. Permission received for 250 copies and renewal 5/03. Received from the publisher, Mind Garden, Inc., Redwood City, CA
3. Child Maltreatment Index. Verbal permission to use selected items received from Glenda Kaufman Kantor, PhD, Research Associate Professor, Family Research Laboratory, University of New Hampshire.

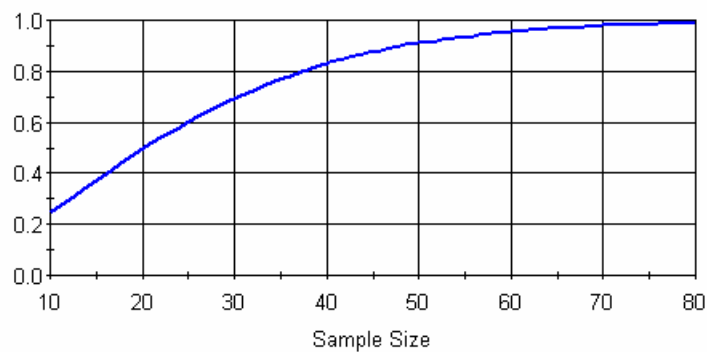
APPENDIX F

Calculation of Power**Power as a Function of Sample Size**Alpha = 0.050, Tails = 2

Power calculation for cross tabulation
(4x2 cells: Four victimization groups and anxiety dichotomized)

N1=	20	60	100	140	180	220	240	280	320
N2=	20	60	100	140	180	220	240	280	320
	0.111	0.260	0.417	0.561	0.682	0.777	0.815	0.876	0.918

Power as a Function of Sample Size



Alpha = 0.050, Tails = 2

Power for ANOVA

(4 levels with 38 cases per cell for a total of 152 cases)

Effect size (f) = 0.27, which yields power of 0.81

N Cell =	10	18	26	32	38	44	48	52
N Total=	40	72	104	128	152	176	192	208
	0.248	0.447	0.621	0.725	0.806	0.866	0.897	0.921

APPENDIX G

Recruitment Reference for Surgical Schedulers

From: Deb Hastings (5-5937) Debra.P.Hastings@Hitchcock.org

The following information should assist you in obtaining the appropriate information for the study.

1. Who should be asked to participate in the study?
All pre-operative women scheduled for elective surgery who are at least aged 18 and no older than 65, who speak, read, and understand English, and who are in no acute distress
2. What is the purpose of the study?
The purpose is to help nurses and other health care providers learn more about women's health issues – particularly issues for women who are scheduled for surgery. It is hoped that findings from the study will help to improve care for women before, during, and after surgery.
3. What information should I share with potential participants?
Potential participants should know that:
 - participation in the study is completely voluntary and
 - will involve an approximately 30 to 45 minute interview.
4. What do I do if a woman is interested in participating?
There are two options.
Option A. Ask for permission to contact the researcher or assistant who will come to the clinic, introduce herself, and escort the patient to a private setting where further details about the study will be shared and if agreeable, informed consent will be obtained, and the interview completed.

Option B. Obtain the following contact information from the patient:
 - her name.
 - her telephone number.
 - a preferred time for the phone call from the researcher.
 The researcher or assistant will call at the agreed upon time and share additional information about the study. If agreeable, a time will be arranged to meet with the patient face to face, obtain written informed consent, and either complete the interview process or schedule a time for a face to face or phone interview.
5. What about consent to participate in the study?
The researcher or her assistant will obtain informed consent in person prior to collecting the data.
6. Once collected, what do I do with the contact information?

If a woman agrees to meet with the researcher at the time surgery is scheduled, contact the researcher via phone (5-5937) or beeper (5937). She will come to the clinic immediately and escort the woman to a private location. If the patient prefers a phone call, you should keep the contact information filed in a secure location until it is collected by the researcher. The researcher will collect the contact information weekly (or more often if necessary).

7. What do I do if I have additional questions, comments, or concerns?
Please feel free to contact the Principal Investigator, Deb Hastings, at the above phone number or email address.

THANK YOU FOR YOUR HELP WITH THE STUDY!!

APPENDIX H

Information Sheet for Potential Participants

- *What is the purpose of the study?*

The purpose is to help nurses and other health care providers learn more about women's health issues – particularly issues for women who are scheduled for surgery. It is hoped that findings from the study will help to improve care for women before, during, and after surgery.

- *What would be required of me to participate in this study?*

Your participation would involve an approximately 45 minute interview that would take place at some point before surgery – either today or at another scheduled time.

- *What kinds of questions are asked on the questionnaires?*

You will be asked questions about yourself, such as your age, the number of children you have, and the level of education you have completed. Some of the questions I ask will address your surgical history, (the number and types of surgery you have had throughout your life), and how anxious you are in certain situations. I will also ask several questions that are more personal in nature: you will be asked to share information about intimate relationships you have had with significant others in your life. The questions do not have right or wrong answers. You will not have to write out any information. Most of the questions will require the researcher to simply circle an optional response.

- *What will be done with the information shared during this study?*

I will review and analyze the questionnaires and information contained in them and will write a report on the results of the study. Results will be reported as group data so that no individual participant will be able to be identified.

- *What is the next step?*

If you are willing, please tell the surgical scheduler that you would like more information about the study.

- If you would like more information before you agree to participate, you may also contact the researcher at 603-650-5937 or 603-524-5995.

REFERENCES

REFERENCES

- Abbott, J. (1997). Injuries and illnesses of domestic violence. *Annals of Emergency Medicine*, 29, 781-785.
- Abbott, J., Johnson, R., Koziol-McLain, J., & Lowenstein, S. R. (1995). Domestic violence against women: Incidence and prevalence in an emergency department population. *Journal of the American Medical Association*, 273, 1763 -1767.
- Alpert, E. J. (1995). Violence in intimate relationships and the practicing internist: New “disease” or new agenda? *Annals of Internal Medicine*, 123, 774 -781.
- American Association of Colleges of Nursing. (1998, October). *Violence as a public health problem: Position statement*. Washington, DC: Author.
- Barr, R. G., Boyce, W. T., & Zeltzer, L. K. (1996). The stress-illness association in children: A perspective form in the biobehavioral interface. In R. J. Haggerty, L. R. Sherrod, N. Garnezy, & M. Rutter (Eds.), *Stress, risk, and resilience in children and adolescents: Processes, mechanisms, and interventions* (pp. 182-224). Cambridge: Cambridge University Press.
- Bergman, B., & Brismar, B. (1991). A 5-year follow-up study of 117 battered women. *American Journal of Public Health*, 81, 1486-1489.
- Berrios, D. C., & Grady, D. (1991). Domestic violence: Risk factors and outcomes. *Western Journal of Medicine*, 155, 133-135.
- Bohn, D. K., & Holz, K. A. (1996). Sequelae of abuse: Health effects of childhood sexual abuse, domestic battering, and rape. *Journal of Nurse-Midwifery*, 41, 442-456.
- Borenstein, M., Rothstein, J., & Cohen, H. (2001). *Power and Precision (Version 2)* [Computer software manual]. Englewood, NJ: Biostat.
- Brendtro, M., & Bowker, L. H. (1989). Battered women: How can nurses help? *Issues in Mental Health Nursing*, 10, 169-180.
- Browne, A., & Finkelhor, D. (1986). The impact of child sexual abuse: A review of the research. *Psychological Bulletin*, 99, 66-77.
- Bullock, L., McFarlane, J., Bateman, L. H., & Miller, V. (1989). The prevalence and characteristics of battered women in a primary care setting. *Nurse Practitioner*, 14(6), 47-56.

- Bullock, K. A., & Schornstein, S. L. (1998). Improving medical care for victims of domestic violence. *Hospital Physician*, 34(9), 42-58.
- Campbell, J. C. (Ed.). (1998). *Empowering survivors of abuse: Health care for battered women and their children*. Thousand Oaks, CA: Sage Publications.
- Campbell, J. C. (2002). Health consequences of intimate partner violence. *The Lancet*, 359, 1331-1336.
- Campbell, J. C., & Humphreys, J. (Eds.). (1993). *Nursing care of survivors of family violence*. St. Louis: Mosby.
- Campbell, J. C., Jones, A.S., Dienemann, J., Kub, J., Schollenberger, J., O'Campo, P., et al. (2002). Intimate partner violence and physical health consequences. *Archives of Internal Medicine*, 162, 1157-1163.
- Campbell, J. C. & Soeken, K. (1999). Forced sex and intimate partner violence: Effects on women's health. *Violence Against Women*, 5, 1017-1035.
- Carlson, B. C., & McNutt, L. A. (1998). Intimate partner violence: Intervention in primary health care settings. In A. R. Roberts (Ed.), *Battered women and their families* (2nd ed., pp. 230-270). New York: Springer.
- Centers for Disease Control and Prevention. (2000). Building data systems for monitoring and responding to violence against women: Recommendations from a workshop. *MMWR Weekly*, 49(11), 1-18.
- Coker, A. L. (2005). Opportunities for prevention: Addressing IPV in the health care setting. *Family Violence Prevention and Health Practice*, 1, 1-9. Retrieved February 3, 2006, from www.endabuse.org/health/jcaho
- Coker, A. L., Pope, B. O., Smith, P. H., Sanderson, M., & Hussey, J. R. (2001). Assessment of clinical partner violence screening tools. *Journal of the American Medical Women's Association*, 58, 19-23.
- Coker, A. L., Sanderson, M., Fadden, M. K., & Pirisi, L. (2000). Intimate partner violence and cervical neoplasia. *Journal of Women's Health & Gender-Based Medicine*, 9, 1015-1023.
- Coker, A. L., Smith, P. H., Bethea, L., King, M. R., & McKeown, R. E. (2000). Physical health consequences of physical and psychological intimate partner violence. *Archives of Family Medicine*, 9, 451-457.
- Coker, A. L., Smith, P. H., McKeown, R. E., & King, M. J. (2000). Frequency and correlates of intimate partner violence by type: Physical, sexual, and psychological battering. *American Journal of Public Health*, 90, 553-559.

- Constantino, R. E., Sekula, L. K., Rabin, B., & Stone, C. (2000). Negative life experiences, depression, and immune function in abused and nonabused women. *Biological Research for Nursing, 1*, 190-198.
- Cox, E. (2003). Synergy in practice: Caring for victims of intimate partner violence. *Critical Care Nursing Quarterly, 26*, 323-330.
- Dearwater, S. R., Coben, J. H., Campbell, J. C., Nah, G., Glass, N., McLoughlin, E., et al. (1998). Prevalence of intimate partner abuse in women treated at community hospital emergency departments. *JAMA, 280*, 433-438.
- DeBellis, M. D. (2001). Developmental traumatology: The psychobiological development of maltreated children and its implications for research, treatment, and policy. *Development and Psychopathology, 13*, 539-564.
- Dienemann, J., Glass, N., & Hyman, R. (2005). Survivor preferences for response to IPV disclosure. *Clinical Nursing Research, 14*, 215-233.
- Dohrenwend, B. S., & Dohrenwend, B. P. (Eds.). (1974). *Stressful life events: Their nature and events*. New York: Wiley.
- Drossman, D. A., Leserman, J., Nachman, G., Li, Z., Gluck, H., Toomey, T.C., et al. (1990). Sexual and physical abuse in women with functional or organic gastrointestinal disorders. *Annals of Internal Medicine, 113*, 828-833.
- Drossman, D. A., Talley, N. J., Leserman, J., Olden, K. W., & Barreiro, M. A. (1995). Sexual and physical abuse and gastrointestinal illness: Review and recommendations. *Annals of Internal Medicine, 123*, 782-794.
- Eby, K. K., Campbell, J. C., Sullivan, C. M., & Davidson, W. S. (1995). Health effects of experiences of sexual violence for women with abusive partners. *Health Care for Women International, 16*, 563-576.
- Ellis, J. M. (1999). Barriers to effective screening for domestic violence by registered nurses in the emergency department. *Critical Care Nursing Quarterly, 22*, 27-41.
- Family Violence Prevention Fund (FVPF). (2002). *National consensus guidelines on identifying and responding to domestic violence victimization in health care*. San Francisco: Author.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, et al. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) study. *American Journal of Preventive Medicine 14*, 245-258.

- Finestone, H. M., Stenn, P., Davies, F., Stalker, C., Fry, R., & Koumanis, J. (2000). Chronic pain and health care utilization in women with a history of childhood sexual abuse. *Child Abuse & Neglect*, 24, 547-56.
- Finkelhor, D., & Dzuiba-Leatherman, J. (1994). Children as victims of violence: A national survey. *Pediatrics*, 94, 413-420.
- Flitcraft, A. (1995). From public health to personal health: Violence against women across the life span. *Annals of Internal Medicine*, 123, 800-802.
- Flitcraft, A. (1997). Learning from the paradoxes of domestic violence. *JAMA*, 277, 1400-1401.
- Freund, K. M., Bak, S. M., & Blackhall, L. (1996). Identifying domestic violence in primary care practice. *Journal of General Internal Medicine*, 11, 44-46.
- Fulton, D. R. (2000). Recognition and documentation of domestic violence in the clinical setting. *Critical Care Nursing Quarterly*, 23, 26-34.
- Gerber, M. R., Leiter, K. S., Hermann, R. C., & Bor, D. H. (2005). How and why community hospital clinicians document a positive screen for intimate partner violence: A cross-sectional study. *BMC Family Practice*, 6(48). Retrieved February 3, 2006, from <http://www.biomedcentral.com/1471-2296/6/48>
- Giles-Sims, J. (1998). The aftermath of partner violence. In J. L. Jasinski, & L. M. Williams (Eds.), *Partner violence: A comprehensive review of 20 years of research* (pp. 44-72). Thousand Oaks, CA: Sage Publications.
- Glaser, R., Kiecolt-Glaser, J. K., Marucha, P. T., MacCallum, R. C., Laskowski, B. F., & Malarkey, W. B. (1999). Stress-related changes in proinflammatory cytokine production in wounds. *Archives of General Psychiatry*, 56, 450-456.
- Griffith-Kenney, J. (1986). Abuse and battering. In J. Griffith-Kenney (Ed.), *Contemporary women's health: A nursing advocacy approach* (pp. 198-220). Menlo Park, CA: Addison-Wesley.
- Guth, A. A., & Pachter, H. L. (2000). Domestic violence and the trauma surgeon. *American Journal of Surgery*, 179, 134-140.
- Hanmer, J. (1996). Women and violence: Commonalities and diversities. In B. Fawcett, B. Featherstone, J. Hearn, & C. Toft (Eds.), *Violence and gender relations: Theories and interventions* (pp. 7-21). Thousand Oaks, CA: Sage Publications.
- Hartzell, K. N., Botek, A. A., & Goldberg, S. H. (1996). Orbital fractures in women due to sexual assault and domestic violence. *Ophthalmology*, 103, 953-957.

- Hastings, D. P., & Kaufman Kantor, G. (2003). The relationship of women's victimization history to surgical intervention. *AORN Journal*, 77, 163-180.
- Heim, C., Newport, D. J., Heit, S., Graham, Y. P., Wilcox, M., Bonsall, R., et al. (2000). Pituitary-adrenal and autonomic responses to stress in women after sexual and physical abuse in childhood. *JAMA*, 284, 592-597.
- Heise, L., Ellsberg, M., & Gottemoeller, M. (1999, December). *Population reports, Series L, No. 11*. Baltimore: Johns Hopkins University School of Public Health, Population Information Program.
- Heitkemper, M., Jarrett, M., Taylor, P., Walker, E., Landenburger, K., & Bond, E. F. (2001). Effect of sexual and physical abuse on symptom experiences in women with irritable bowel syndrome. *Nursing Research*, 50, 15-23.
- Helton, A., McFarlane, J., & Anderson, E. (1987). Prevention of battering during pregnancy: Focus on behavioral change. *Public Health Nursing*, 4, 166-174.
- Horan, D. L., Chapin, J., Klein, L., Schmidt, L. A., & Schulkin, J. (1998). Domestic violence screening practices of obstetrician-gynecologists. *Obstetrics & Gynecology*, 92, 785-789.
- Joint Commission on Accreditation of Healthcare Organizations. (2005). *Comprehensive accreditation manual for hospitals*. Oakbrook Terrace, IL: Author
- Kaufman Kantor, G., & Jasinski, J. L. (1998). Dynamics and risk factors in partner violence. In J. L. Jasinski & L. M. Williams (Eds.), *Partner violence: A comprehensive review of 20 years of research* (pp 1-43). Thousand Oaks, CA: Sage Publications.
- Kendall-Tackett, K.A. (1999). Victimization and diabetes: An exploratory study. *Child Abuse & Neglect*, 23, 593-596.
- Kendall-Tackett, K. A. (2000). Physiological correlates of childhood abuse: Chronic hyperarousal in PTSD, depression, and irritable bowel syndrome. *Child Abuse & Neglect*, 24, 799-810.
- Kendall-Tackett, K. A. (2003). *Treating the lifetime health effects of childhood victimization*. Kingston, NJ: Civic Research Institute.
- Kendall-Tackett, K. A., Marshall, R., & Ness, K. (1999, August). *Victimization, healthcare utilization and health maintenance*. Poster session presented at the meeting of the American Psychological Association, Division of Health Psychology, Boston, MA.
- Kernic, M. A., Wolf, M. E., & Holt, V. L. (2000). Rates and relative risk of hospital admission among women in violent intimate partner relationships. *American Journal of Public Health*, 90, 1416-1420.

- Kitzinger, J. (1990). Recalling the pain. *Nursing Times*, 86(3), 38-40.
- Koss, M. P., Koss, P. G., & Woodruff, W. J. (1991). Deleterious effects of criminal victimization on women's health and medical utilization. *Archives of Internal Medicine*, 151, 342-347.
- Kyriacou, D. N., Anglin, D., Taliaferro, E., Stone, S., Tubb, T., Linden, J. A., et al. (1999). Risk factors for injury to women from domestic violence. *New England Journal of Medicine*, 341, 1892-1898.
- Lehmann, C. (2002, July 19). Psychiatrists urged to ask about domestic violence. *Psychiatric News*, 37(14), 8.
- Leserman, J., Drossman, D. A., Li, Z., Toomey, T. C., Nachman, G., & Glogau, L. (1996). Sexual and physical abuse history in gastroenterology practice: How types of abuse impact health status. *Psychosomatic Medicine*, 58, 4-15.
- Lutz, K. F. (1999). Maintaining client safety and scientific integrity in research with battered women. *Image: Journal of Nursing Scholarship*, 31, 89-93.
- Marucha, P. T., Kiecolt-Glaser, J. K., & Favagehi, M. (1998). Mucosal wound healing is impaired by examination stress. *Psychosomatic Medicine*, 60, 362-365.
- McAfee, R. E. (1999). Family violence: A neglected epidemic. *Archives of Facial and Plastic Surgery*, 1, 133-134.
- McCain, N. L., Gray, D. P., Walter, J. M., & Robins, J. (2005). Implementing a comprehensive approach to the study of health dynamics using the psychoneuroimmunology paradigm. *Advances in Nursing Science*, 28, 320-332.
- McCance, K. L., & Shelby, J. (1994). Stress and disease. In K. L. McCance & S. E. Huether (Eds.), *Pathophysiology: The biologic basis for disease in adults and children* (2nd ed., pp. 299-320). St. Louis: Mosby.
- McCauley, J., Kern, D. E., Kolodner, K., Derogatis, L. R., & Bass, E. B. (1998). Relation of low-severity violence to women's health. *Journal of General Internal Medicine*, 13, 687-691.
- McCauley, J., Kern, D. E., Kolodner, K., Dill, L., Schroeder, A. F., DeChant, H. K., et al. (1995). The "battering syndrome": Prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. *Annals of Internal Medicine*, 123, 737-746.
- McFarlane, J., Christoffel, K., Bateman, L., Miller, V., & Bullock, L. (1991). Assessing for abuse: Self-report versus nurse interview. *Public Health Nursing*, 8, 245-250.
- McFarlane, J. M., Groff, J. Y., O'Brien, J. A., & Watson, K. (2006). Secondary prevention of intimate partner violence: A randomized controlled trial. *Nursing Research*, 55, 52-61.

- McKenzie, K. C., Burns, R. B., McCarthy, E. P., & Freund, K. M. (1998). Prevalence of domestic violence in an inpatient female population. *Journal of General Internal Medicine, 13*, 277-279.
- McLeer, S. V., & Anwar, R. (1989). A study of battered women presenting in an emergency department. *American Journal of Public Health, 79*, 65-66.
- McNutt, L. A., Carlson, B. E., Persaud, M., & Postmus, J. (2002). Cumulative abuse experiences, physical health and health behaviors. *Annals of Epidemiology, 12*, 123-130.
- McNutt, L. A., Waltermaurer, E., McCauley, J., Campbell, J., & Ford, D. E. (2005). Rationale for and development of the computerized intimate partner violence screen for primary care. *Family Violence Prevention and Health Practice, 3*, 1-12. Retrieved February 3, 2006 from <http://endabuse.org/health/ejournal/archive>
- Morse, J. M., & Field, P. A. (1995). *Qualitative research methods for health professionals* (2nd ed.). Thousand Oaks, CA: Sage.
- Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1996). The long-term impact of the physical, emotional, and sexual abuse of children: A community study. *Child Abuse & Neglect, 20*, 7-21.
- National Advisory Council on Violence Against Women. (2001). Improving the health and mental health care systems' response to violence against women. Chapter 2 in *Toolkit to end violence against women*. Washington, D.C.: Author. Retrieved February 3, 2006, from <http://toolkit.ncjrs.org>
- NH Child Protection Act, RSA 169-C:29-30 (1979).
- Newton, R. R., & Rudestam, K. E. (1999). *Your statistical consultant: Answers to your data analysis questions*. Thousand Oaks, CA: Sage Publications.
- Ochs, H. A., Neuenschwander, M. C., & Dodson, T. B. (1996). Are head, neck, and facial injuries markers of domestic violence? *Journal of the American Dental Association, 127*, 757-761.
- Parker, B., & Ulrich, Y. (1990). A protocol of safety: Research on abuse of women. *Nursing Research, 39*, 248-250.
- Plichta, S. B., & Falik, M. (2001). Prevalence of violence and its implications for women's health. *Women's Health Issues, 11*, 244-258.
- Poirier, L. (1997). The importance of screening for domestic violence in all women. *The Nurse Practitioner, 22*(5), 105-122.
- Roberts, A. R. (Ed.). (1998). *Battered women and their families: Intervention strategies and treatment programs* (2nd ed.). New York: Springer.

- Rodriguez, M. A., Bauer, H. M., McLoughlin, E., & Grumbach, K. (1999). Screening and intervention for intimate partner abuse: Practices and attitudes of primary care physicians. *JAMA*, 282(5), 468-474.
- Rose, K., & Saunders, D. G. (1986). Nurses' and physicians' attitudes about women abuse: The effects of gender and professional role. *Health Care for Women International*, 7, 427-438.
- Rote, N. S. (1994). Immunity. In K. L. McCance & S. E. Huether (Eds.), *Pathophysiology: The biologic basis for disease in adults and children* (2nd ed., pp. 299-320). St. Louis: Mosby.
- Rounsaville, B., & Weissman, M. M. (1978). Battered women: A medical problem requiring detection. *International Journal of Psychiatry in Medicine*, 8, 191-202.
- Rubin, N. J., & Gardner, J. (1999). Abuse history: Is it really important in the medical encounter? *Southern Medical Journal*, 92, 618-621.
- Sadler, A. G., Booth, B. M., Nielson, D., & Doebbeling, B. N. (2000). Health-related consequences of physical and sexual violence: Women in the military. *Obstetrics & Gynecology*, 96, 473-480.
- Schornstein, S. L. (1997). *Domestic violence and health care: What every professional needs to know*. Thousand Oaks, CA: Sage Publications.
- Schwartz, E. D. & Perry, B. D. (1994). The post-traumatic response in children and adolescents. *Psychiatric Clinics of North America*, 17, 311-326.
- Selye, H. (1956). *The stress of life*. New York: McGraw-Hill.
- Selye, H. (1974). *Stress without distress*. Philadelphia: Lippincott.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *State-Trait Anxiety Inventory for Adults*. Redwood City, CA: Mind Garden.
- Stark, E., Flitcraft, A., & Frazier, W. (1979). Medicine and patriarchal violence: The social construction of a "private" event. *International Journal of Health Services*, 9, 461-493.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*, 17, 283-316.
- Talley, N. J., Fett, S. L., & Zinsmeister, A. R. (1995). Self-reported abuse and gastrointestinal disease in outpatients: Association with irritable bowel-type symptoms. *American Journal of Gastroenterology*, 90, 366-371.

- Thakkar, R. R., & McCanne, T. R. (2000). The effects of daily stressors on physical health in women with and without a childhood history of sexual abuse. *Child Abuse & Neglect, 24*, 209-221.
- Tilden, V. P., & Shepherd, P. (1987). Increasing the rate of identification of battered women in an emergency department: Use of a nursing protocol. *Research in Nursing & Health, 10*, 209-215.
- Tjaden, P., & Thoennes, N. (2000a). *Extent, nature, and consequences of intimate partner violence: Findings from the National Violence Against Women Survey* (NCJ 181867). Washington, DC: National Institute of Justice.
- Tjaden, P., & Thoennes, N. (2000b). *Full report of the prevalence, incidence, and consequences of violence against women: Findings from the National Violence Against Women Survey* (NCJ 183781). Washington, DC: National Institute of Justice.
- Turner, R. J. & Lloyd, D. A. (1995). Lifetime traumas and mental health: The significance of cumulative adversity. *Journal of Health and Social Behavior, 36*, 360-376.
- U.S. Census Bureau. (1997). Census 1997.
- U.S. Census Bureau. (2000). Census 2000.
- U.S. Department of Justice. (1998). *Violence by intimates: Analysis of data on crimes by current or former spouses, boyfriends, and girlfriends* (BJS Report No. NCJ 167237). Annapolis, MD: BJS Clearinghouse.
- Wagner, P. J., & Mongan, P. F. (1998). Validating the concept of abuse: Women's perceptions of defining behaviors and the effects of emotional abuse on health indicators. *Archives of Family Medicine, 7*, 25-29.
- Walker, E. A., Gelfand, A., Kataon, W. J., Koss, M. P., Von Korff, M., Bernstein, D., et al. (1999). Adult health status of women with histories of childhood abuse and neglect. *American Journal of Medicine, 107*, 332-339.
- Wisner, C. L., Gilmer, T. P., Saltzman, L. E., & Zink, T. M. (1999). Intimate partner violence against women: Do victims cost health plans more? *Journal of Family Practice, 48*, 439-443.
- Woods, A. B., Page, G. G., O'Campo, P., Pugh, L. C., Ford, D., & Campbell, J. C. (2005). The mediation effect of posttraumatic stress disorder symptoms on the relationship of intimate partner violence and IFN- γ levels. *American Journal of Community Psychology, 36*, 159-175.

- Woods, S. J. (2005). Intimate partner violence and post- traumatic stress disorder symptoms in women: What we know and need to know. *Journal of Interpersonal Violence, 20*, 394-402.
- Woods, S. J., & Wineman, N. M. (2004). Trauma, posttraumatic stress disorder symptom clusters, and physical health symptoms in postabused women. *Archives of Psychiatric Nursing, 18*, 26-34.
- Woods, S. J., Wineman, N. M., Page, G. G., Hall, R. J., Alexander, T. S., & Campbell, J. C. (2005). Predicting immune status in women from PTSD and childhood and adult violence. *Advances in Nursing Science, 28*, 306-319.
- Wukasch, R. N. (1996). The impact of a history of rape and incest on the posthysterectomy experience. *Health Care for Women International, 17*, 47-55.
- Zink, T., Jacobson, C. J., Regan, S., & Pabst, S. (2004). Hidden victims: The healthcare needs and experiences of older women in abusive relationships. *Journal of Women's Health, 13*, 898-908.