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**The reported incidence of domestic  
violence in pregnancy:  
Interrelationships with substance use  
and birthweight**

Cornelia Adriana Roodt

2003

**The reported incidence of domestic violence in  
pregnancy: Interrelationships with substance use and  
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A thesis submitted in partial fulfilment of the  
requirements for the degree of Master of Philosophy in Midwifery  
at Massey University,  
Palmerston North: New Zealand.

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## **Abstract**

In a prospective non-experimental design, the purpose of the study was to answer the question of what the incidence of domestic violence would be in a cohort of pregnant Waikato women aged 18 years and older. Two hypotheses were included for testing, which were a) domestic violence by itself during pregnancy is associated with lower birthweights and b) domestic violence in combination with substance use during pregnancy are associated with lower birthweights.

Twelve midwives participated as interviewers and recruited 105 women to the study. Two research instruments were used. The Abuse Assessment Screen (AAS), a reliable five-question abuse-focused screen and a questionnaire to collect demographic data and substance use habits. The AAS was administered in a personal interview by the LMC and the questionnaire was self-administered. Data was to be collected from each participant on three occasions. However, the research tools were administered three times in only 26.6% (n=28) of cases.

Data was analysed by using the Statistical Package for the Social Sciences (SPSS Version 10). The following findings emerged:

- The reported incidence of domestic violence during pregnancy was found to be 7.8% in a Waikato cohort of 105 women aged 18 years and older.
- Both hypotheses were rejected based on statistical t-tests
- Historic and recent abuse are strongly associated with abuse during pregnancy.
- Women who disclosed historic abuse are significantly more likely to smoke
- Women who smoke are significantly more likely to have lower birthweight babies.

The multiple limitations of the study precluded the ability to extrapolate the findings nationally. This study merely opened the door on the issues of abuse during pregnancy and its sequelae in one New Zealand context.

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- Marina, my daughter, who is the artist of the bodymap

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# **Chapter 1**

## **Introduction**

### **Overview**

Domestic violence as a phenomenon and its effects became a recognised public health issue only in recent years. Child abuse was the first to receive rightful recognition for the problem it is. Domestic violence in the broader sense remained a hidden problem until many years later. New Zealand is approximately two decades behind the United States in terms of recognising and dealing with domestic violence as a public health concern.

Domestic violence during pregnancy lags even further behind. A lack of local scientific evidence on the extent of domestic violence in pregnancy suggests that New Zealand is in its infancy in recognising and responding to abuse during pregnancy. It is against this background that the current study was undertaken to determine the reported incidence of domestic violence in a pregnant cohort of Waikato women over the age of 18 years. The study also aimed to establish the interrelationships between domestic violence, substance use and birthweight.

### **Domestic violence – A "family matter"?**

The term "family violence" is often used interchangeably with "domestic violence". As such it encompasses all forms of violence that occur between family members. In turn, "family" is used to describe the situation where a group of individuals are living together in a variety of intimate relationships.

Thus child abuse - physical and sexual, elder abuse and adult-adult abuse are all forms of family violence. They all share another point in common - for centuries Western Society has been reluctant to interfere in what is regarded as "family matters" and, until relatively recently, family violence was a "family matter".

There were several intertwining reasons for this attitude.

- There was a belief that family autonomy and responsibility resulted in stable families and hence a stable and economically efficient society (Cohen, 1949). In New Zealand an early example of this belief in action was reflected in the concerns expressed about the 1882 proposals for a National Insurance scheme. There was a fear that state aid for those in poverty would create problems for society through the loosening of family bonds of responsibility (Koopman-Boyden & Scott, 1984).

The same attitude is reflected in a submission quoted by Cohen (1949) in his book. This submission was made by The Charity Organisation Society, one of the leading English Welfare Agencies of the late nineteenth century. The Charity Organisation Society opposed the introduction of school meals on the grounds that it was more in the interests of the community to allow: "... the sins of the parents to be visited on the children than to impair the principle of solidarity of the family and run the risk of permanently demoralising large numbers of the population" (Cohen, 1949, p. 20).

- The law has historically imposed on parents - initially fathers - a number of duties, e.g. to support, to protect, to educate. In return parents (and

particularly fathers) have been given power over their children. Thus the law endorsed and safeguarded the principle of family autonomy (Mnookin & Weisberg, 1989).

Family law has reflected the concept of the male as the head of the family. The common law vested marital property in one spouse - the husband. To some degree, wives and children were viewed as "chattels" (O'Brien, 1991). This concept had its origins as early as 753 BC when married women were defined as "necessary and inseparable possessions" of their husbands (Dobash & Dobash, 1979). In New Zealand it took the Matrimonial Property Act, 1976 to adequately redress this imbalance.

- Historically the use of physical force within the family was sanctioned by law. A husband's authority to "chastise" his wife was incorporated into early English common law. Blackstone, in 1763, explained it thus: "For, as he is to answer for her misbehaviours, the law thought it reasonable to entrust him with a power of restraining her by domestic chastisement." (in Hilberman, 1980, p. 1337).

In the United States, by virtue of a 1824 law, a husband's right to hit his wife was legitimate so long as "he ... used a switch no bigger than his thumb" (Martin, 1976). This legislation remained on the statute books for 50 years.

- In a more general sense, physical violence within the family has been accepted as normal. The concept of "spare the rod and spoil the child" has its origin at least as far back as Biblical times (Proverbs 13:24 (KJV)). It remains enshrined in New Zealand legislation where parents are exempted

from a charge of assault if they use "reasonable force" against their children (S.59 Crimes Act, 1961).

Some New Zealand parents have a liberal attitude towards the definition of "reasonable force". In a random sample of over 300 current parents, two percent said they had given their child "a really severe thrashing" and eleven percent reported that they had "hit with a strap, stick or something similar" (Maxwell, 1993, p. 6). The study also surveyed parental beliefs. Eighty-seven percent believed parents should have the right to hit their child and thirty-one percent thought a "severe thrashing" would "sometimes" be necessary (Maxwell, 1993, pp.7-8.) This study was undertaken by way of a telephone survey. So while random, it still required an adult who was a parent to be at home when the call was made, and only surveyed those who had telephones.

James and Jane Ritchie (1970) have studied child-rearing practices in New Zealand since the 1970s. Their most recent survey was in 1987 (Ritchie & Ritchie, 1997). From kindergarten lists they obtained a sample of 109 mothers, 86 fathers and 100 solo mothers. Each family had a four-year-old child who was the focus of the interview. The demographics of the sample matched national figures "reasonably well". (p.85). Fifty percent of the sample physically punished (defined as spanking) their child once a week or more. Fourteen percent of the focus children were spanked at least once a day.

With the culture of the male as the head of the household, and physical discipline as an integral part of family life, it is but a small step to include and accept male - female violence in the mix. This form of violence was initially classified as a "private family relationship problem" (Henaghan & Atkin, 1992. p, 184).

### **Domestic violence - A hidden problem**

All of the factors described above created a situation where the sanctity of the family, together with its idealised image, combined to create an environment where the reality, and detrimental impact, of violent family relationships were not only ignored but also denied.

The issue has been subject to what Gelles & Strauss (1979) described as "a public and professional perceptual blackout" (p.15). O'Brien (1971) had reached a similar conclusion when he observed that the index of the Journal of Marriage and the Family from its inception in 1939 through 1961 contained no references to "violence". In New Zealand, the goal of preserving the "family" - regardless of the reality of the situation - persisted into the 1980 Family Proceedings Act. The requirement for mandatory counselling on application for a separation<sup>1</sup> order was included (albeit with some judicial discretion) despite the opposition of the Battered Women's Support Group (Henaghan et al., 1992).

---

<sup>1</sup> A separation order is issued pursuant to part iii of the Family Proceeding Act 1980. If granted its effect is that "so long as a separation order remains in force, neither party to the marriage shall be under an obligation to cohabit with the other party" (Section 23).

## **Domestic violence – “Nobody's” problem**

Against this backdrop health professionals have struggled to gain recognition for the issue and to find ways of coping with the consequences. Some degree of success has been achieved. In the USA, Gelles (2000) describes the last 30 years as being a period during which family violence has been transformed from "a private trouble to a social problem" (p.298).

It has to be noted that, world-wide, for much of this period the different types of family violence were considered separately. Gelles (2000) described this trend in the U.S. as the "balkanisation" of family violence into separate issues with child abuse policy being developed independently from policy dealing with domestic violence against women.

It was a similar situation in New Zealand. During the period from the late 1970s through to the early 1990s, at an official level there was uncoordinated policy development around different types of family violence. Elvidge (1997) commented:

The health sector has already made some responses to the issue of family violence as it affects children, and a partial response in the development of referral services for the elderly suffering from family violence. However there is no formal response to family violence from the health sector in its effects on adults either in policy, protocols, professional training or service provision (p.1).

Activity in the field of child abuse in New Zealand commenced with the 1978 Interdepartmental Committee on Health, Education and Social Welfare and was

carried on through the 1980s by the Minister of Social Welfare's National Advisory Committee on the Prevention of Child Abuse.

Adult-adult abuse in the family setting was slower to receive official recognition in New Zealand. In 1979 the Committee on Women published a report "Battered Women - An analysis of Women & Domestic Violence, & the Development of Women's Refuges" but a national co-ordinating committee - the Family Violence Prevention Co-ordinating Committee - was not established until 1986.

Recognition of the significance of the problem of child sexual abuse in New Zealand came even later. National Guidelines on the Investigation & Management of Child Sexual Abuse were first published in 1986 (Department of Social Welfare, 1986).

One example of the consequence of a lack of co-ordination of policy development in the domestic violence field in New Zealand was the situation that developed over female complainants giving evidence in cases of alleged sexual assaults (Henaghan, Taylor, & Geddis, 1990). In 1985 a law change provided special rules that enabled the complainant to give their evidence in writing at the pre-trial hearing (Summary Proceedings Amendment, 1985). The purpose was to save the complainant from giving oral evidence twice - because of the potential emotional trauma they might suffer. But the law change failed to include those sections of the Crimes Act 1961, which specifically related to sexual offences against children. Until the anomaly was corrected in 1990 (Evidence Amendment Act), the situation existed where adults and not children

were protected from the potential trauma of cross-examination by a hostile lawyer acting for the accused.

However the Ministry of Health (MoH) (2002) has now recognised the "substantial overlap" between child and partner abuse since the likelihood of child abuse rises with increasing violence between partners. The MoH further acknowledges that "frequent co-occurrence of child abuse and partner abuse within families means the issues cannot be addressed in isolation" (p.4).

The New Zealand Government provided the following definition in their "Statement of Policy on Family Violence" (1996):

Family violence encompasses a range of behaviours perpetrated by partners and former partners, family members, household members and within other close personal relationships.

Family violence encompasses

- Physical abuse
- Sexual abuse
- Psychological abuse, which is defined as including intimidation, harassment, damage to property, threats of physical, sexual, or psychological abuse, and (in relation to a child) causing or allowing the child to witness the physical, sexual, or psychological abuse of another person (Department of the Prime Minister and Cabinet, 1996, p. 5).

### **Overview of domestic violence in New Zealand**

Acknowledgement of the seriousness of the problem of family violence appears to have been slower in New Zealand than in some other parts of the western world. Even though Kempe, Silverman, Steele, Deogemoeller and Silver in the

U.S highlighted in 1961 the reality of child abuse, as late as 1972 in New Zealand the Minister of Social Welfare wrote: "It is pleasing to note that in comparison with other sources of childhood injury, child abuse is not a problem of major social importance in New Zealand" (Department of Social Welfare, p. i). Recognition came to the U.K. in 1974 with the Report into the death of Maria Colwell (Department of Health and Social Security). New Zealand only started to come to grips with the problem in 1978 (Interdepartmental Committee on Health, Education & Social welfare).

Acceptance of the reality of male-female domestic violence has followed a similar path. In the United Kingdom, Erin Pizzey established the first refuge for battered women in Chiswick, London in 1971. She is also credited with writing the first book on the subject of male-female domestic abuse (Pizzey, 1974).

The first women's refuge in New Zealand was established in Christchurch in 1974 (Committee on Women, 1979). By 1999 there were 56 "safe houses" in New Zealand (Ruakawa-Tait, 2000).

In 1976 the U.K. passed the Domestic Violence & Matrimonial Proceedings Act. It was 1982 before the Domestic Protection Act was passed in New Zealand.

Even with such official recognition of the problems of male-female domestic abuse in New Zealand, attitudes in some quarters were slow to change. There was no consistency throughout the country in the way provisions within the legislation for non-violence orders and non-molestation orders were enforced (National Collective of Independent Refuges, 1991).

A number of Family Court judges tended to interpret the legislation in favour of attempting to maintain the family relationship (Inglis, 1984). One group of commentators, writing about judges' apparent lack of understanding of domestic violence stated: "There seems to be an inability to recognise that domestic violence is about power and control. Offenders often use the court system and access (to their children) as a means of maintaining control over their victim." (Tapp, Geddis, & Taylor, 1992, p.191).

There was also criticism of police attitudes (Church & Church, 1984). This resulted in the establishment of an official police research project in Hamilton in 1986 (Ford, 1986). Ford reported that police traditionally classified domestic violence as "domestic disputes" and most officers viewed them as "nuisance or petty" complaints that never received priority (p.9). They did not believe that attending such disputes was part of their job.

The Hamilton project was based on a "zero tolerance" approach to domestic violence and a policy of dealing urgently with any such complaints. As a result of the study the Commissioner of Police announced policy changes based on the Hamilton project approach (1987). However critics claimed that the change of policy did not uniformly change police practice (Bush, Robertson, & Lapsley, 1992).

This is all the more surprising given the evidence to support the statement that domestic violence is a significant social problem in New Zealand. The following statistics are taken from the New Zealand Government Statement of Policy on Family Violence (1996):

- 40% of all homicides between 1988 and 1993 resulted from domestic disputes.
- 8,763 women and their 12,130 children sought assistance from women's refuges in the 12 month period from July 1994 to June 1995.
- In 1995 over 8,000 applications for non-violence and non-molestation orders were made to the family court.
- In 1994/95 there were 9,959 reports of male assaults against females made to the police (an increase of 17.5% over the year before).
- A 1993/94 Coopers & Lybrandt report estimated the economic cost of family violence to be between \$187 billion and \$5,302 billion (Department of the Prime Minister and Cabinet, 1996).

These facts led the New Zealand Government to identify the reduction in family violence as one of the seven priority goals in crime prevention (Department of the Prime Minister and Cabinet, 1996).

The Statement of Policy on Family Violence noted family violence to be a major problem affecting the "entire New Zealand community and [one which] generates significant social and economic costs which are borne by all" (p.4.).

Adult-adult domestic violence in New Zealand is predominantly a male abuse issue. The Hamilton Abuse Intervention Pilot Project (HAIPP) analysed data from 528 family violence incidents, which occurred between 1991 and 1994. In 99% of cases the perpetrators of the violence were male (Maxwell, 1994). In the

11th Annual Report of the National Collective of Independent Women's Refuges Inc. (in Coggan, Fanslow, & Norton, 1995) the figures showed that 82% of the male abusers of women who sought refuge, were intimate partners of the abused women.

The male perspective on domestic violence was gauged by the Justice Department "Hitting Home" study of 2,000 New Zealand men (Leibrich, Paulin, & Ransom, 1996). Eighty seven percent of those men interviewed knew that "hitting a woman is a crime" (p.16), yet 25% held the opinion that "... physical abuse of women partners is okay in some circumstances" (p.16). Overall this representative sample of New Zealand men had a "high level of general hostility and anger" (p.16). It is therefore not surprising that 21% of the sample reported at least one act of physical abuse in the previous year and 53% acknowledged at least one psychologically abusive act<sup>2</sup> in the same time frame (Leibrich et al., 1996). The researchers concluded that the "... most abusive men had the highest levels of anger and were most likely to blame women for being abused" (Leibrich et al., 1996, p.7).

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<sup>2</sup> The most common acts of psychological abuse were:

- insulting or swearing at a woman (36%)
- insulting or swearing at a woman (36%)
- putting down her family and friends (20%)
- trying to prevent her from doing something she wanted (19%)
- throwing, smashing, hitting/kicking something (17%)
- humiliating her in front of family/friends or mates (10%)

The immediate impact of domestic violence on the victims is described in the above-mentioned HAIPP analysis of 528 domestic violence files (Maxwell, 1994). Sixty one percent had visible injuries recorded of which 80% were to the head, neck and face. Analysis of the police records established that in 58% of the 528 cases, children were present in the house at the time of the assault. In those cases where comments were made on the emotional reactions of children, fear and distress were almost universally recorded. In 15% of the cases children actively tried to stop the abuse and 10% tried to actively protect the victim from further harm. In 16% of the cases the abused woman was pregnant. This figure could be underestimated, as the advocates did not routinely ask the victim's pregnancy status (Maxwell, 1994).

Overall, New Zealand research has also tended to focus on narrow aspects of domestic violence. A detailed study around early identification in a maternity hospital of mothers who might subsequently experience severe parenting difficulties failed to explore in any detail the possibility of partner abuse during the pregnancy (Geddis, Monaghan, & Muir, 1979). The researchers did not include a midwife in the team.

It has been observed that each country passes through a similar developmental sequence in their recognition of, and approach to, different aspects of violence in the family (Kempe, 1978). First there is denial that there is a problem. Next the media develop interest in the more lurid cases. Following this the various subtle components of the problem are recognised and appropriate strategies developed. Finally there is an acknowledgement that it is the right of every individual to be assisted to reach their optimum development - free from

violence or the threat of violence. If the developmental sequence described above is applied to the approach to abuse during pregnancy, the lack of New Zealand research on the topic would suggest that the field is at a very early stage.

### **Synopsis of the Present Study**

It is against this backdrop that I formulated the research question: what is the reported incidence of domestic violence amongst a cohort of pregnant women from the Waikato region, aged 18 years and older? Overseas literature on domestic violence and pregnancy commonly refers to the high incidence of substance use by abused women with subsequent low birth weight outcomes. In view of the lack of local research on the topic I added to the above mentioned research question two hypotheses. These are:

- 1      Domestic violence by itself during pregnancy is associated with lower birthweights.
- 2      Domestic violence in combination with substance use during pregnancy are associated with lower birthweights.

### **Overview of the thesis**

Following this introduction is a literature review on firstly, male-female domestic violence (hereafter termed "domestic violence") and secondly, domestic violence in pregnancy. I then outline the design and method of my research followed by my findings. Finally the significance of the findings is discussed,

conclusions are drawn and recommendations made for clinical practice, education and further research.

## **Chapter 2**

### **Domestic Violence, the phenomenon**

*"We like to think of the ... home as a place of safety and support, but for all too many people, it is no longer the 'safe haven' against a violent society."* (Campbell, Harris, & Lee, 1995, p. 108.).

#### **Introduction**

The impact of domestic violence on the perpetrator, victim and children is wide ranging, often severe, long lasting and can be fatal (Bohn & Holz, 1996). Domestic violence is a societal problem with a well-recognised inter-generational impact (Widom, 1989). Boys growing up in abusive homes are more likely to be abusive adults (Carmen, Rieker, & Mills, 1984; Paluzzi, 1996; Walker, 1979). The outcome for girls is less clear, but research suggests that they are more prone to enter violent relationships and tend to remain longer in these situations (Hilberman, 1980; Paluzzi, 1996). Dobash & Dobash (1979) noted that females who revealed the presence of domestic violence in their families of origin reported they had grown to expect violence in their relationships and, as such, saw few options to end the violence.

Physical violence is disproportionately directed at women (Chez, 1988; Hillard, 1985). The claim was made in an American book that assault by a male partner accounts for more injuries to females than car accidents, rape and muggings combined (Strauss, 1980). In the Australian context, police figures reveal that women are eight times more likely than men to be victims of domestic violence

(Hegarty, Hindmarsh, & Gilles, 2000) and one American study cited women's risk of being injured by abuse as approximately 13 times more than men (Campbell et al., 1995). Canadian data on women who are abused revealed that 25% suffer episodes of beating, 20% of choking and 20% of sexual assault. Forty percent suffer injury and 15% require medical care as a result of partner violence. Separate from physical violence, 19% of women suffer emotional abuse and controlling behaviour, including financial abuse or control (Canadian Centre for Justice Statistics, 2000).

Domestic violence is an issue of power and control with ever-increasing isolation imposed on the victim. This isolation may leave the woman with limited resources and limited access to help (Adler, 1996; Bohn & Holz, 1996).

In this first of two literature chapters the aim is to introduce domestic violence as a commonly occurring phenomenon across the world. Specific reference is made to the three D's of domestic violence, namely, definition, dynamics and demographics (Paluzzi & Houde-Quimby, 1996). The exploration of relevant theories underpinning the domestic violence phenomenon, society's attitude to abuse and the healthcare provider's response complete this chapter. Chapter three explores the impact of domestic violence in pregnancy and the effect on pregnancy outcome.

### **Definition**

Most definitions describe the woman as the victim and the male as the

assailant<sup>1</sup>, as females are over-represented in violent incidents in the home (Goldberg & Tomlanovich, 1984). Abbott, Johnson, Koziol-McLain and Lowenstein (1995) defined domestic violence as "...either an injury (hitting, punching, slapping, or other trauma) or stress (from threats of violent behaviour or from her own fears) to a woman caused by a boyfriend or husband." (p.3). Some authors go further and incorporate into the definitions their understanding of the reasons behind the violence. For example, Taft (2001) defined domestic violence as "systematic, physical, sexual, psychological, emotional, economic or spiritual abuse of one intimate partner by the other, almost always male, to control ... or intimidate ..." (p. 250). This Australian researcher further elaborates by saying: "In this definition, the emphasis is placed on intent, as the purpose of the abuser is to intimidate and control the victim and victims are often afraid of the perpetrators." (p.250).

In another article, Taft, Hegarty and Flood (2001) focus on the issue of control when they define intimate partner violence, from a health perspective, as that "... chronic behaviour that is characterised not by episodes of physical violence which punctuate the relationship but by the emotional and psychological abuse that the perpetrator uses to maintain control over their partner." (p. 499). Campbell (2002) uses an alternative formulation to express much the same point, when she states that "psychological coercion and degradation almost always accompany [physical] violence." (p. 2).

---

<sup>1</sup> The researcher acknowledges that males are not exempted from domestic violence, but for the purposes of this work the focus will be on women as the victims of abuse.

Smith, Danis, and Helmick (1998) capture all of the above components in their definition of domestic violence as: "... a process whereby one member of an intimate relationship experiences vulnerability, loss of power and control, and entrapment as a consequence of the other member's exercise of force through the patterned use of physical, psychological, sexual or moral force." (p. 2).

### **Dynamics of domestic violence**

Most of the definitions quoted above have been formulated for academic purposes. This can result in a somewhat dry and abstract combination of words. Thus the reality of the impact of domestic violence on those caught up in the situation can be obscured. The detrimental cycle<sup>2</sup> of abuse causes serious physical and psychological damage to everyone involved (Walker, 2000). Walker (2000) reminds the reader that children in abusive homes are not only at high risk for physical child abuse, but almost all are psychologically abused by merely living in the violent environment. In a book based on her research, Walker reported her finding that women claimed they were more likely to use physical discipline on their children when they were living with their abusive partners. "Again, the theory that violence begets more violence is obvious here." (Walker, 2000, p. 217).

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<sup>2</sup> The word "cycle" can be seen in two different ways. It is firstly used in the same context as described in the text in the Walker Cycle Theory of Violence (1979), manifesting itself in the lives of its victims in a cyclic phenomenon of tension building, an acute violent outburst and a reconciliation phase. Secondly, this cyclic phenomenon is also transmitted intergenerationally.

Both the patterns for future violent behaviour and the response of learned helplessness are set in childhood and early family life experiences. The exposure to family violence imprint different behavioral tendencies on male and female childhood victims and these long-term sequelae are discussed under the topic "Early family life and ongoing victimisation". The Walker Cycle Theory of Violence (1979) and an attempt to construct the likely demographic characteristics of the abused woman, complete the discussion on the dynamics of domestic violence.

### **Early family life and ongoing victimisation**

Walker (2000) states that the most common risk-marker for both men and women becoming involved in a violent relationship, is exposure to violence. Retrospective accounts of battered women and their husbands have often indicated the presence of domestic violence in their families of origin (Rosenbaum & O'Leary, 1981). In the Leibrich et al. (1995) study, a nationwide sample of 2000 New Zealand men aged 17 years and older, were interviewed about domestic violence. By using census data, the country was divided into 88 stratified units. The number of clusters in each of the 88 units was determined by its share of the total population. Every third household within each cluster was called until a total of five interviews was completed. Sixty seven percent of those interviewed stated they had personal knowledge of men hitting women. They either knew a perpetrator or victim of abuse or they had witnessed male on female violence. This illustrates the general exposure to violence in the New Zealand context. Henderson and Erickson (1994) commented that violent families breed violent families and Campbell et al. (1995) state that "victims of

violence become perpetrators of violence" (p. 108). Pears and Capaldi (2001) agree that abuse in childhood predicts abusiveness toward the next generation, thus bringing about an intergenerational transmission of violence. Maltreatment in childhood, especially sexual abuse, is a suggested indicator of interpersonal victimisation in later life (Draucker, 1997).

In her book, based upon numerous studies and years of experience, Walker (2000) claims that 60% of batterers<sup>3</sup> actually witnessed their fathers battering their mothers. In her view, the history of the batterers' childhood indicated that they have learned to respond with violence when emotionally distressed. This conduct also correlates with other violent behaviours such as child abuse, violence towards others, destruction of property and a high percentage of arrests and convictions, supporting a learning theory to explain domestic violence (Walker, 2000). In New Zealand, Balzer, Haiman, Henare and Matchitt (1997) studied Maori family violence and found that 44 of the 51 male offenders of family violence (86%) witnessed violence as a child. The researchers continue:

Violence is a learned behaviour. People's attitudes are influenced by childhood experiences; if they are raised within a violent family environment and do not see consequences for using violence, they are likely to accept violence as a means of achieving what they want or as a resolution to difficulties. (p. 30).

It is interesting to note that 15% of the representative 2000 men in the Leibrich et al. (1995) study offered "family background" as a "perceived cause of abuse" (p. 49). Upbringing was listed by this sample as the fifth most important cause

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<sup>3</sup> In the context of Walker's research, the batterer is the male perpetrator of violence.

of why men hit their partners. Men in the Leibrich et al. research rated alcohol (62%), economic and job problems (54%), dynamics of the relationship (43%) and the individual man's personality (36%) as more likely causes of domestic violence than family background. However, all of the factors are to a varying degree, influenced by "family background". Leibrich et al. summarised the statements made by the participants on causality of violence as follows:

There are certain expectations about 'what it is to be a man'... These expectations are learned socially (through upbringing...). Various circumstances ... mean that a man cannot meet these expectations... This leads to emotional distress ... and a wish to regain some sense of control... he relieves the pressure he feels through physical expression of anger... (p. 121).

### **The mental health impacts of domestic violence**

The mental health impacts of domestic violence on its victims are serious and profound. According to Carmen et al. (1984):

Victims of physical and sexual abuse are faced with an extraordinary task of conflict resolution as they look for a context in which bodily harm and threats to life can be understood. When the assailant is an intimate or a family member, this process is immeasurably complicated by the profound betrayal of trust (p. 382).

Carmen et al., (1984) retrospectively studied a psychiatric patient cohort of 188 males (n=65) and females (n=123). They conducted an in-depth examination of the psychiatric in-patient records, using a standardised coding instrument. The researchers of this North American study found 43% (n=80) of the overall sample reported past physical and/or sexual abuse. Females reported a 53% abuse rate. One criticism of this study is that only in-patient records were used. It is possible that some cases could have been missed, as direct abuse-focused

questions might not have been asked. In another North American study, Jacobson and Richardson (1987) used direct questioning techniques to establish assault experiences. They found 81% of the 100 male (n=50) and female (n=50) psychiatric inpatients claimed experiences of serious assault sometime in their lives.

The abused male and female victims in Carmen et al.'s study (1984) had to deal with anger, aggression, poor self-image and difficulty with trust. The researchers described the tendency of abused patients to be hospitalised for longer periods, compared to non-abused patients. They considered this was largely due to a delay in establishing a therapeutic relationship because of the abused patients' inability to trust. Furthermore, their low self-esteem led the abused patients to believe they were undeserving of treatment.

In Carmen et al's (1984) study, victims of abuse did not direct emotional outbursts toward their abusers. The females aimed their hatred and aggression towards themselves. These behaviours were manifested on a continuum from quiet resignation and depression to self-mutilation and suicide attempts. In comparison, even though experiencing many of the same feelings as abused women, the male subjects directed their aggression towards others. It is important to note that the male participants in this study were mainly adolescents and this therefore could limit the generalisability of their behaviours to male adults. Carmen et al. concluded that "patterns of sex role socialization obviously shape the differential responses to abuse of males and females." (p. 382). It is interesting to note that children who witnessed their mothers being abused, display similar behaviours to that of Carmen et al's abused psychiatric

sample. In New Zealand, Pocock (1994) compared a sample of seventeen 5-11 year old Women's Refuge children with a population subsample of 11, 5-11 year old non-Refuge children. After observing their behaviour, Pocock (1994) commented: "Refuge males distinguished themselves by their overly aggressive and often inappropriate responses. Female Refuge children distinguished themselves by the passive and aggressive extremes of their interpersonal problem-solving responses." (p. i).

Since females are significantly overrepresented as victims of domestic violence, further exploration of the literature focuses exclusively on women.

From her study of 400 abused women, Walker (2000) concluded that there may be "susceptibility factors that originate in childhood" (p. 215) which cause abused women to focus on developing survival skills in violent relationships rather than escaping early before the violence reaches threatening proportions. The data collected in Walker's (2000) study indicated that the abused woman's current state of functioning in the violent relationship is directly influenced by her prior experiences, and this tendency to remain a victim has been described in Walker's theory of learned helplessness (Walker, 1979).

### **The Walker (1979) Learned Helplessness Theory**

Walker proposed the theoretical construct of learned helplessness in an effort to make sense of the abused woman's apparent reluctance to leave a battering relationship. Walker's (1979) study of battered women indicated that they remained in the relationship, not because they like being beaten, but because they have difficulty leaving. In her theory, Walker described the psychological

rationale behind why women become victims in the first place and how the "process of victimization is perpetuated to the point of psychological paralysis" (p.43).

Learned helplessness was first described by Martin Seligman (in Walker, 1979), an experimental psychologist. He subjected caged dogs to repeated electrical shocks. At first these dogs attempted to escape, but because nothing they did could control the shocks, they became passive and submissive. Even when the researcher changed the procedure by leaving the door open, providing an escape route, the dogs did not react. The researchers repeatedly had to drag the dogs to the exit to re-train them to respond voluntarily. The earlier in life the dogs received the treatment, the longer it took to overcome the learned helplessness (Walker, 1979, p. 45-46). Based on this knowledge Walker developed the learned helplessness theory for battered women. The theory has three basic components.

The first is about information of upcoming life events. The second her belief or cognitive representation about what will happen and the third component is her response to the event. The cognitive representation about events is the expectation that response and outcome are not related. In practice, if the battered woman believes that she has no control over response-outcome variables (even though in fact she has), she responds with the learned helplessness phenomenon. Once the woman operates from this belief of lack of control, the perception becomes a reality and she becomes passive, submissive and "helpless". Koss (1990) agrees that helplessness has a debilitating effect on problem-solving skills and battered women become blind to their options.

They learn to accept battering as a way of life and feel unable to influence its occurrence. Koss (1990) continues by saying that battered women become less skilled at self-protection and more skilled at survival strategies. Their self-worth and personal boundaries are being violated and their self-confidence eroded away by constant victimisation. The end result is an individual who is unable to free herself from her circumstances, resulting in learned helplessness (Hillard, 1985).

McLean (2001) writes about a friend of a homicide victim who died in an acute battering incident who commented as follows:

He had been the main figure in her life since her mid-teens and [she] had not tasted life in a violence-free world...she put up with abuse, seemingly accepting it as her fate. I told Matekino that Peter was a psycho and I didn't like him .... She says "oh well, it's my life". (McLean, 2001.p. A8).

Battered women also have a tendency to generalise their helplessness to other areas of their lives, thus affecting their sense of well being. These women are more prone to depression and anxiety and it appears that much of their behaviour is directed to ward off depression (Walker, 1979).

Walker turned back to the animal studies to look for suggested ways to reverse the helplessness in the battering relationship. Just as the researchers repeatedly had to drag the dogs out to show them how to escape, battered women mostly require help from outside. Walker (2000) observed battered women's amazing coping strategies in battering relationships, but she also discovered that those women will remain victims unless they learn a different set of skills which will enable them to terminate their harmful relationships. Battered women need to understand what success is, in order to raise their

motivation and aspiration levels. This then enables them to initiate new and effective responses to control their own lives. Feelings of competence and a good self-esteem are extremely important to combat feelings of helplessness, and counselling can effectively erase this kind of victim potential (Chez, 1988; Walker, 1979).

Walker's (1979) learned helplessness theory has encountered opposition in the literature. Campbell and Weber (2000) criticise the theory for its emphasis on pathology. They recognised strengths in battered women, which seemed far removed from helplessness. But Walker (1979) also observed that abused woman exhibit extraordinary strengths. She interviewed many abused women in her studies and noted these women's remarkable ability to withstand intense pain for days without seeking medical assistance for injuries sustained during the acute battering episode. Although these women have outstanding strength to minimise their situation and tolerate immense pain, they still have a low self-esteem, trapping them in the ongoing cycle of violence of their intimate relationships (Chez, 1988).

### **The Walker Cycle Theory of Violence**

Campbell (1989) found domestic violence to be a pattern or process rather than a single occurrence. Appleton and Washington (1980) described abuse as a cyclic phenomenon, associated with patterns of violence learnt by both participants. In the "Walker Cycle Theory of Violence", the turbinate characteristics of violence in the battering relationship are described as a pattern with three phases (Walker, 1979):

### Phase one: The tension-building phase.

This is the initial phase. It is characterised by increased verbal abuse, minor physical violence and a decrease in meaningful communication. Name-calling, pushing, shoving, throwing objects and psychological abuse occur with increasing frequency as the tension mounts. A battered woman who has been through this phase before may attempt to calm the batterer, nurture him and stay out of his way. During this time she might reason with him, refuse to argue, threaten him with divorce or even call the police in an effort to try and make him promise to end the violence. This period shows increased levels of anxiety or anxious depression in the woman and once the tension exceeds the couple's ability to cope, the next phase erupts.

### Phase two: The acute battering phase

During this acute phase either partner may initiate the episode of violence. The batterer may do so to relieve tension. Furthermore, decreased inhibitions secondary to alcohol or drug use or increased outside stress may also tip the scale. The abused woman may initiate the battery<sup>4</sup> to gain some advantage by precipitating the inevitable attack at a certain time or place. Information gathered about what happens during the acute battering incident comes from the battered women themselves, as the few batterers ever interviewed claim to have been unable to accurately recall the second phase (Walker, 2000). During the acute battering phase the abused woman's only option is to endeavour to

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<sup>4</sup> "An intentional striking causing physical damage." (Appleton & Washington, 1980, p. 85)

find a safe place to hide. The batterer is the only one who can stop the beatings and he only does so when he becomes exhausted and emotionally drained. The batterer often wakes the woman to begin his assault. Nothing she says or does can prevent or stop the battering. In fact, her screams or attempts to defend herself may provoke him even further. The batterer does not stop even if his victim is severely injured. During this dangerous phase the abused woman tries to remain calm. She tends to not feel the pain as much as she feels psychologically trapped in her inability to escape (Walker, 1979).

As mentioned earlier, the batterer claims to be unable to recall the acute violent assault, which is the hallmark of the second phase, whereas the battered woman manages to give a clear, detailed account of the incident. This is an interesting phenomenon as at the time of the acute beatings, the woman often experiences a sense of dissociation where she retreats, watching herself being thrown across the room or down the stairs. Many of the reactions, including the sense of dissociation battered women report, coincide with the reactions of catastrophe victims where the emotional collapse only occurs 24 to 48 hours after the event (Walker, 1979).

### Phase three: Loving contrition

The third phase is one of profuse apologies, kindness and remorse, reinforcing the cycle as the woman hopes that this phase will last and that the violence might stop after all. The batterer showers his victim with flowers and promises and he himself might believe that he would manage to never be violent again. The woman wants desperately to believe him and when she experiences the

very acts she fell in love with during their time of courtship, the relationship is sealed for the next cycle. The reconciliation phase is typically shorter than the tension building phase and it is thought to grow shorter as the cycles are repeated. Walker (2000) found in her research that sometimes the third phase is devoid of tension, but no loving contrition is observed. In some cases women perceive that tension and danger levels remain high with no return to loving contrition. Walker (1979) considered this to be a sign of the woman's increased risk of being killed by the batterer.

In the course of these three phases observations have been made of the abused women's utilisation of resources (Appleton & Washington, 1980). During the first phase both the woman and her partner tend to access health services when they seek assistance for psychosomatic symptoms as the tension mounts in their relationship. Some abused woman will present to the Emergency Department seeking first aid after the acute battering incident (Appleton & Washington, 1980). Other abused women tend to seek medical help, if any at all, several days after the injuries were inflicted (Walker, 2000). The contact with health providers during or shortly after the acute battering is complicated by denial and humiliation displayed by the injured women. Together with unfamiliarity about the nature of domestic violence on the part of the health professional, this may lead to "incomplete diagnosis and treatment" (Appleton & Washington, 1980, p. 90). It is at this point, however, that the abused woman is most receptive to assistance if non-judgmental care is provided (Appleton & Washington, 1980). The woman may be hospitalised for injuries inflicted during the acute battering phase. While an in-patient, her apparent concerned attitude

for her abuser during the reconciliation phase, could be wrongly interpreted by health professionals as being masochistic (Hilberman, 1980).

From the evidence examined it is not clear at what point in the cycle of violence the abused woman is most likely to be in need of psychiatric services. Women with histories of assault, including domestic violence, are over-represented in psychiatric inpatient populations (Carmen et al., 1984; Jacobson & Richardson, 1987). Stark and Flitzcraft (1995) studied a population of 176 seemingly normal American women admitted with suicide attempts. Trained abstractors examined the medical records of this group of women and provided data to the researchers suggesting battering was the most probable cause. The researchers concluded that the adaptive responses to the violence and stress the abused woman is subjected to "... can mimic frank psychiatric disease, particularly depressive and anxiety disorders." (p. 59). The researchers advocated "protective hospitalization" in cases of attempted suicide until the threat of violence is eliminated (p. 60).

### **Demographics of Domestic Violence**

Abuse occurs across all boundaries and it is therefore not possible to stereotype the battered woman. Numerous studies on the topic of domestic violence describe the demographics of their abused sample. The researcher has focused on studies on the topic of abuse during pregnancy in an attempt to construct a silhouette of pregnant abused women's personal and social contexts.

The following demographic factors were commonly found:

- Socio-economic factors: Hillard (1985) studied 742 pregnant women and found 31% of the women who admitted to being abused, compared to 20% of the non-abused females, were at the lower end of the financial scale. Campbell, Poland, Waller and Ager (1992) established an association of battering with problems obtaining the necessities of life, such as housing and Gazmararian et al. (1995) noted an increase in rates of abuse amongst women living in crowded households. O'Campo et al. (1995) postulated that economic strain might give rise to an increased risk of domestic violence, which is consistent with the mentioned researchers' findings of a strong link between battering and economic deprivation.

Based on the above it is therefore reasonable to argue that abused women are more likely, but not exclusively, found amongst the low-income population. Walker (2000) found the abused women she studied to be more financially isolated when living with the batterer, although three quarters of the sample reported that they were employed during their battering relationship. When Walker's findings are interpreted in the light of other studies quoted, they appear to paint a picture of economic strife regardless of whether the abused woman is earning an income or not. This tendency of the batterer to rule the household's financial affairs translates accurately to the power and control behaviour exhibited by all the batterers studied by Walker (2000).

- Ethnicity: In a North American study of 12 612 women, Gazmararian et al. (1995) found higher reported rates of physical violence amongst women of races other than white. Cokkinides and Coker (1998) concluded from their

study of 6718 white and African-American pregnant women that the prevalence of partner physical abuse was greater for the non-white women. Berenson, Stiglich, Wilkinson and Anderson (1991), on the other hand found more abuse reported amongst white non-Hispanic American women, whereas Richardson et al. (2002) found in Britain that the black women in their 1035 female sample were least likely to have ever experienced physical violence. The studies from different countries described the abused women in their respective samples as originating from different ethnic groups.

McFarlane, Parker, Soeken, Silva and Reed (1999) disregarded the role of ethnicity in domestic violence when they concluded from their study that race was no indicator for domestic violence. The conclusion from the cited findings is that domestic violence is experienced across all ethnic boundaries. Caution is therefore called for in any attempt to predominantly attribute violence to a particular ethnic group. Health professionals should screen all pregnant women carefully, as abuse can affect any pregnant woman. In the absence of comparable data from New Zealand studies, one must extrapolate from the overseas data.

- Age: Australian researchers, Webster, Sweett and Stoltz (1994) noted an age effect in their study of 1014 women; the prevalence of abuse during pregnancy decreased with increasing age. The same researchers also revealed a 43.7% abuse rate amongst the teenagers (age 16 years and older) in their study. This finding is in keeping with that of Gazmararian et al. (1995) who described higher rates of physical abuse in women aged 20

years and younger in their retrospective study of 12 612 mothers. The above figures resemble non-pregnancy statistics. Richardson et al. (2002) reported that the women aged 45 years and older in their study, "were significantly less likely to have experienced physical violence within the past twelve months" (p. 3), whilst the women in the 16 to 24 year age bracket were at high risk of being abused. The prevalence rate of abuse for 16 – 24 year olds was not quantified.

- Education: In their North American studies, both Hillard (1985) and Gazmararian et al. (1995) found the educational levels of the abused women to be significantly lower than that of the non-abused women. Webster et al. (1994) noted a higher prevalence of physical and emotional abuse among women with education only up to secondary level, compared to women with tertiary education. However, Webster et al. (1994) also found that 21% of the abused women with the lower educational level sought outside help compared with only 5% of women with a tertiary qualification. The question therefore arises whether women with higher educational levels truly experience less domestic violence or whether a perception of stigmatisation might prevent them from disclosing and admitting to violence in their intimate relationships.
- Marital Status: Gazmararian et al. (1995) found the reported rates of physical violence in their study were higher for those women who were not married at the time the study was undertaken. Battered women were more likely to be divorced or separated compared to those in the control groups in a number of studies involving both pregnant and non-pregnant women

(Berenson et al., 1991; Gazmararian et al., 1995; Hillard, 1985; Richardson et al., 2002; Webster et al., 1994). It is unclear from the literature whether divorced or separated women disclosed abuse from previous abusive partners or whether they became involved in abusive relationships after divorce or separation. Webster et al. (1994) found in their study of 1014 pregnant women that the married women reported the lowest level of abuse and therefore suggested “... marriage confers a degree of protection against domestic violence.” (p. 470). The researchers however acknowledged the potential implication for married women when disclosing abuse. The threat of legal involvement or retaliation by her husband could possibly prevent some married women admitting to abuse. This hypothesis is supported by the small proportion of married women who sought outside help, compared to the group of abused women who had never married or were separated.

In conclusion, King and Ryan (1996, p. 436) concluded that “women abuse is completely democratic; neither color, culture, ethnicity, marital status, age, sexual orientation, nor social class have been definitely causally associated with abuse by their intimate partners.” It is clear that abuse is not discriminatory and can affect any family in any society.

### **Domestic Violence – society’s attitude**

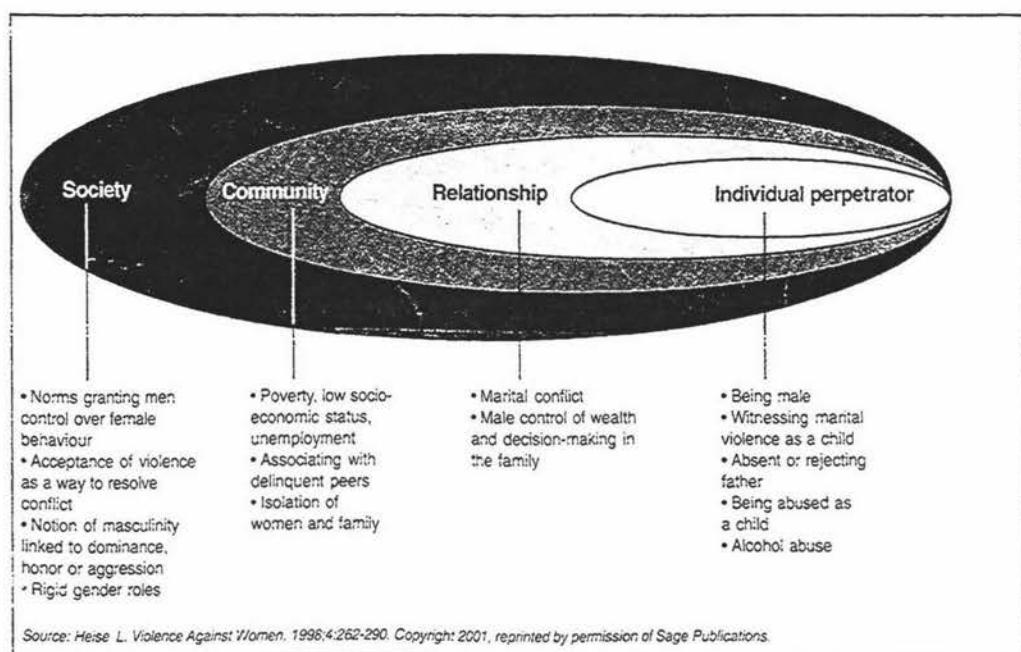
Violence against women, especially violence committed in her home by her intimate partner, is a major public health issue. Chez (1988) reviewed American research studies on the incidence of domestic violence and concluded that

domestic violence is "... pervasive in our society and its frequency has reached epidemic proportions" (p. 1). Figures are based on a variety of sources, such as police records or refuge statistics, but it is generally accepted that domestic violence is under-recognised and under-reported and that the prevalence is higher than studies suggest (Bewley & Gibbs, 1994; Webster et al., 1994). It is also accepted that physical abuse is disproportionately directed at women (Hegarty et al., 2000). Chez (1988) agrees that more than 90% of partner abuse is male on female violence. Taft et al. (2001) describe male-to-female aggression in intimate relationships as reflective of the patterns set out by male domination in most societies. Furthermore,

Partner abuse is seen as more likely to occur in a context of unequal power relationships within the family, where social attitudes support male authority over female family members, women's unequal access to economic security and domestic violence as a private concern rather than a public issue. (Taft et al., 2001, p. 499).

Taft et al. (2001) adopted an ecological model (Figure 2.1) in an attempt to explain differing concepts of partner abuse at different levels (individual, couple, family or community and society).

Figure 2.1 Ecological model<sup>5</sup> (Taft et al., 2001).



The following true story illustrates how society's attitude contributes to sustaining the culture of domestic violence. Betsy McCandless was an educated woman with a masters degree who at age 42 got married for the first time. Betsy's brother told the world of her suffering at the hands of her new husband and how she finally escaped from his power and control. He also told the world how the justice system failed Betsy. In spite of many visible injuries, the judge dismissed her case and awarded the perpetrator \$5000 of Betsy's money.

Enriched and empowered that the court would do nothing to him, he walked away free, never to spend one night in jail. Betsy became the prisoner. She did not spend a single night in her own apartment again, nor did she go back to her

<sup>5</sup> Appendix K contains the permission from the publishers to use the Figure.

job. She knew he would carry out his death threats. Betsy was right. Her husband waited for her in her apartment one night. Five months after she left him he killed her first and then himself. The full story can be accessed on the following website: (<http://endabuse.org/stories/mccandless.php3>) Retrieved 4/11/01).

### **The Health Provider Model and domestic violence**

As illustrated by Betsy's story, women subjected to violence pay a heavy price in terms of their physical and mental health and sometimes with their lives. The attitudes of health professionals, who deal with abused women, have long been recognised as potentially harmful. Many health professionals, including nurses and midwives, do not intervene in domestic violence because they subscribe to society's myths that abuse is a private matter or that abused women desire to stay in the violence (Henderson, & Erickson, 1994). The next two sections outline the typical responses to abused victims by health systems and the providers of health care within these systems.

Battered women not only present with acute injuries, but also seek help from the health system for a broad range of physical and mental health problems. North American researchers, Bergman and Brismar (1991) conducted a five-year follow-up study of 117 battered women and concluded that "the use of somatic hospital care was dramatically higher among the battered women than among the control women." (p. 1488). The same researchers found physical injury to be only one of many symptoms with which battered women presented and commented on their impression of how "...heavily loaded

psychologically..." (p. 1488) the women in their study appeared to have been. To Hillard (1985) it was more than an impression when she calculated that 43% of the 81 abused women in her American study reported emotional problems compared to 5% of the 661 control subjects. She also cited a number of psychosomatic symptoms, which could lead the abused woman to seek healthcare. These were, "headaches, symptoms of hyperventilation, dizziness, fatigue, weakness, gastrointestinal symptoms, depression, anxiety, low back pain, musculoskeletal chest pain, or pelvic pain..." (p. 189).

This frequent contact with the health system presents health workers with an opportunity for early identification and intervention. However, Randall (1990) observed that there is a tendency as the battering escalates for abused women to experience increasing feelings of isolation, from those institutions and resources that are presumably in a position to help. Stark and Flitzcraft (1995) established from the chart reviews of the 176 American women in their study population, that over a third sought help from the hospital with abuse-related injuries or complaints the very same day as their suicide attempt. The researchers were critical of the clinical response to these women, which fell short of providing the much needed recognition and support. Stark and Flitzcraft claim that the typical healthcare response aggravates the abused woman's dilemma:

[By prescribing].... anti-anxiety agents to help them "cope", institutionalization at the state mental hospital with little evidence of psychiatric disease, and referrals "home", often with no follow-up of any kind. This pattern of response isolated women from resources vital to their survival, replicated the batterer's pattern of denial and victim blaming, and reinforced [the] women's sense,... [of] "entrapment". (p. 58)

In New Zealand it is well documented how government agencies, including the health system, fail to effectively intervene in cases of domestic violence. The following account appears to focus exclusively on a child abuse victim, but the reader is reminded that the boy's mother was an abused woman. Neither child nor spouse abuse was ever screened for in any of the multiple contacts with the health care system.

In June 2000 the Office of the Commissioner for Children released a report on the investigation into the death of a five-year-old boy, James Whakaruru. James was seen forty times by health practitioners. There were four presentations at the same Emergency Department, two admissions and one outpatient appointment. Plunket had three face-to-face contacts and he visited four general practices a total of thirty times. Yet, the overall picture was never put together due to poor communication and collaboration between agencies. This situation was compounded by the fact that some individual practitioners appeared oblivious to the risks to which this child was exposed.

The aim of the following condensed history, is to pay tribute to the short life of James Whakaruru who was caught up in a typical abusive environment which is all too well described in the literature:

James Whakaruru's life was at risk even before he was born when his mother unsuccessfully attempted to commit suicide ten days before his birth. She was only fifteen years old and homeless. The very young pregnant teenager was seen by a psychiatrist and referred to a social worker, but was never followed up.

The chronology of government agency and health sector involvement in the short life of James Whakaruru is well recorded. He had multiple visits to health professionals for treatment of physical injuries, recorded as being inconsistent with the explanation offered. Police attended the first documented domestic incident in December 1995 when James' mother was assaulted in his presence. Despite charges pressed against the perpetrator, he continued to breach bail conditions, subjecting James to more abuse. Ben Haerewa was finally jailed in November 1996 and released in March 1997. In September 1997 the Department of Corrections terminated the court ordered supervision. Ben Haerewa had never reported to them since May 1997. James died at the hands of Ben Haerewa on the 4<sup>th</sup> of April 1999. James' mother was arrested for assault with a blunt object and ill treatment of a child. Te Rangi Whakaruru was sentenced to two years-suspended jail sentence and two years of supervision (Office of the Commissioner for Children, 2000).

A strong link exists between child and wife abuse. Thirty percent to 59% of mothers of children reported for child abuse are victims of domestic violence themselves (Wright, Wright & Isaac, 1997). This link was very evident in the lives of James and his mother Te Rangi Whakaruru. Wright et al. (1997) also found in their study that battered women rarely are identified in paediatric emergency rooms, which is in keeping with the numerous contacts Te Rangi Whakaruru had through her injured son, and in which her own abused status went undetected.

Sooner or later most abused women will require medical care. A Dunedin study (Mullen, Romans-Clarkson, Walton, & Herbison, 1988) found that approximately

a quarter of the abused women in their sample required medical treatment for injuries sustained. The health system, therefore seems a "...logical entry point for the identification of most domestic violence survivors..." (Paluzzi, 1996, p. 428). Two New Zealand studies (Howden-Chapman, 1994; Hetrick 1995) of victims' attitudes make it clear that victims want health care professionals to initiate a conversation about abuse. In Queensland, Australia, Webster, Stratigos and Grimes (2001) conducted a study on women's responses to screening for domestic violence. Ninety-eight percent of the 1313 respondents expressed approval, indicating a belief that the healthcare setting is a safe and appropriate place to disclose experiences of domestic violence. The high rate of support for screening was interpreted as an implied belief that healthcare providers may be in a position to assist abused women.

The next section examines the attitudes of health professionals with specific emphasis on the attitudes of nurses and midwives.

### **Attitudes of Health Professionals**

"Battered women are referred to as a 'health problem in disguise', yet they generally go unrecognized or are ignored by health professionals, including nurses." (Wilson, 1999, p. 1). Moss and Taylor (1991) examined the elements of identification, assessment and intervention for domestic violence and found concept stereotypes held by health care professionals such as "sanctity of the family, family rights to privacy, the right of husbands to control wives, and the belief that the violence may be justified..." (p. 1159). Chez (1988) called these "myths, biases and prejudices" if held by health professionals as "impediments

to [providing] care" to the abused woman (p. 3). Inadequate assessment of the woman presenting with injuries suggestive of abuse and the lack of appropriate intervention by health professionals present major barriers to effective intervention.

In New Zealand, Denise Wilson (1999) studied nurses' responses to abused women. This was a qualitative study guided by a Grounded Theory approach. She used the analogy of Lewis Carroll's "Through the Looking Glass" (1872) to describe her findings. Four themes emerged in Wilson's study and she described them as follows: The first group of nurses did not recognise or acknowledge women who experienced abuse or those women who presented with injuries suggestive of abuse. Wilson called this theme "not seeing". In the nursing sample studied, professional immaturity, naivety and lack of educational preparation tended to be found in the early stages of the nurse's journey in understanding domestic violence. Nurses expressed a turning point in their practice once awareness of abuse issues was raised. The nurses then displayed the ability to recognise incongruity between women's stories and the nature of their injuries. Until nurses reached this point, abused women were "not seen" in clinical practice. This situation is not restricted to nurses. A survey of Wellington GPs revealed that their identification rate for female domestic violence was 0.4 per 1,000 (Kljakovic, 1995).

The second theme Wilson described was "seeing but not seeing", referring to the nurse's choice to "not see" despite the awareness of incongruity between the woman's story and the injuries with which she presented. Nurses blamed a lack of privacy and time available to them, as reasons for not further exploring

women presenting with suspicious injuries. "The acute setting was also seen as inappropriate to intervene and explore 'social' issues of the women." (Wilson, 1999, p. 3). Again the situation pertains to other health professionals. Sugg (1992) interviewed 38 doctors, 89% of whom were GPs. The physician found that exploring domestic violence in the clinical setting was analogous to "opening Pandora's box". The physicians responded that dealing with domestic violence issues made them feel uncomfortable ("too close for comfort") (39%); they experienced a fear of offending when screening (55%) and they expressed a sense of powerlessness to help (50%) (p. 3158).

Wilson (1999) considered that the absence of protocols to guide practice, as well as possible personal experiences of domestic violence, impacted on the nurses' ability to direct intervention. If the high prevalence of domestic violence in the general population is extrapolated to providers, there can be no doubt that a number of health professionals dealing with affected individuals will be survivors themselves, or may still be caught up in abusive relationships. Parsons, Zaccaro, Wells and Stovall (1995) examined attitudes and practices toward screening for violence in obstetric and gynaecological patients and found that 19.9% of the physicians themselves reported personal experience of abuse or a history of violence in the family. This provides confirmation of the high prevalence of domestic violence and that abuse is also present in higher socio-economic groups.

The third theme Wilson (1999) called "seeing but acting ineffectively". This was where nurses in the study recognised the abused woman, but their actions were inept. The inadequate preparation of nurses to deal with abuse resulted in trial

and error in their intervention efforts.

There are many barriers that impede health professionals' ability to deal effectively with the abused woman in the clinical environment. For example, overall time constraints, lack of confidential time with the abused individual, staffing issues and personal experiences of abuse (Mezey, Bacchus, Haworth, & Bewley, 2003). Moore, Zaccaro and Parsons (1998) studied the attitudes and practices of registered nurses toward abused women and found that hospital employed nurses were most likely to fear offence when screening for domestic violence. The same study revealed that practice nurses were the least likely of all the groups to screen, whereas public health nurses reflected the highest level of screening.

A Nurse/midwife may be the first health professional the abused woman meets in her health care encounter. This contact may provide that golden opportunity to act as an advocate for the abused woman and introduce her to early intervention (King & Ryan, 1996). However, the reality of many health providers' insensitivity in their encounters with abused women see the consequences of abuse treated, but the cause of the injuries ignored (Henderson & Erickson, 1994). Randall (1990) phrased it as follows:

... most physicians wouldn't consider discharging a patient with a life-threatening condition, [yet] data from emergency department records show that a majority of women who are victims of domestic abuse are discharged without any arrangements made for their safety, to return to the same abusive relationship that caused their injuries (p. 939).

In spite of overwhelming evidence of the devastation caused by domestic violence, many health professionals still are reluctant to screen for it (Moore et

al., 1998; Moss & Taylor, 1991; Parsons et al., 1995).

The fourth theme Wilson (1999) identified in her study of nurses' responses to women who experience partner abuse, was "seeing for effective action". Nurses developed the skills to effectively intervene only after "educational preparation" and with "workplace assistance" (Wilson, 1999, p. 5). The elements which transform health practitioners into "seeing for effective action" are discussed below.

#### **"Heard and seen": The effective healthcare response**

Moss and Taylor (1991) are of the opinion that "early intervention is the key to ending the cycle of violence." (p. 1164). However, since women do not usually volunteer their abuse status in the healthcare encounter, direct screening is required (Parsons et al., 1995). In order to "see for effective action" health professionals need to understand the dynamics of abuse and develop skills to identify, assess and intervene in cases of domestic violence. Special skills to facilitate disclosure are essential for a positive interaction with abused women (Wilson, 1999). Health professionals can easily miss the opportunity to offer effective intervention if they choose to only treat the abused individual's immediate symptoms and not the person in a holistic manner (Moss & Taylor, 1991). Furthermore, "[f]ailure to address violence against women sends the message that such abuse is unimportant, forgivable and perhaps even condoned." (Bohn & Holz, 1996, p. 449).

Educational preparation is of the utmost importance, because information facilitates change in healthcare professionals' practice (Moore et al., 1998).

Moss and Taylor (1991) promote the integration of family violence education into the curricula of medical and nursing schools to prepare the practitioner for practice. Paluzzi and Houde-Quimby (1996) stated that in order to "... assess and intervene, the provider must have current knowledge, skills and attitude... to ask the question, [and] offer appropriate information for intervention..." (p. 430). It is also important that health professionals are prepared to deal with their own frustration when a lack of change is observed in the abused woman even after "intervention". The reasons why women do not just immediately leave their abusive environment are multiple and complex. Psychosocial reasons such as legal and social dependence on the batterer, or cultural and religious constraints, may all entrap abused women within their violent relationships (Chez, 1988). Some don't leave because they have no safe place to go (Walker, 1979). Hilberman (1980) and Ulrich (1991) are of the opinion that economic and emotional dependence on the batterer complicate an abused woman's plans to escape. Threats of more violence were she to escape, and from which she has no protection, can also lead her to remain.

Hendy, Eggen, Gisticus, McLeod and Ng (2003) developed a Decision to Leave Scale based on two samples of 631 and 420 respectively, and described seven common subscales that emerged in the decision-making for staying or leaving abusive relationships. These were fear of loneliness, childcare needs, financial problems, social embarrassment, poor social support, fear of harm and the hope that circumstances will change. Wuest, and Merrit-Gray (2002) interviewed 15 Caucasian Canadian women who had left abusive relationships. They found that those women who decided to leave their abusive partners engaged in a four stage process "of reclaiming self" (p. 60). I deem it important

to briefly outline the four stages to enable the reader to reach an understanding that leaving an abusive relationship is a process and not a simple act.

The first stage is “counteracting abuse” when the abused woman learns strategies to minimise the abuse to which she is subjected and to build inner strength. The second stage is “breaking free, which women described as “tortuous and iterative” (p. 60). This stage leads women to draw on their increased competence, to test different exits and consider the consequences of leaving the relationship. The “not going back” third stage saw women establishing and protecting physical and emotional territory separate from the abuser in spite of escalating violence. The final stage of “moving on” is the longest (Wuest & Merrit-Gray, 2002, p. 60). Much the same process is outlined by Urlich (1998). The author also outlines how nurses can assist women through this process.

Finally health professionals dealing with abused women require the positive assistance of their workplace in order to respond effectively. The introduction of protocols is an essential first step to facilitate positive intervention (Wilson, 1999). However, protocols alone do not ensure effective intervention, but have to be reflective of practice. Parsons et al. (1995) support protocol development, but advise that those protocols should then be tested in “... an intervention trial to determine whether [their] use would lead to increased screening and improved management of abuse.” (p. 385). Randall (1990) reviewed the literature to compile a perspective on domestic violence intervention. He found evidence of a hospital that had comprehensive protocols, but in more than 96% of cases studied at that hospital, abused women were not referred to

appropriate agencies.

## **Summary**

Domestic violence is a public health problem with multiple and varied impacts on the family and the wider society. Domestic violence can be physical, emotional, sexual or financial and more often than not exists in more than one form in the abusive relationship.

Many different definitions are found in the literature, but the intent of the perpetrator to exert power and control over his victim is the common central theme of all.

The dynamics of abuse are well described by Walker (1979) as a cycle of tension building, the acute battering incident and reconciliation phase. Violence is detrimental to everyone exposed to its effects and unless the cycle is interrupted, the emotional and psychological sequelae are transmitted from generation to generation. Women in battering relationships experience what Walker (1979) called learned helplessness, a form of psychological paralysis. This mental state makes it difficult for the woman to simply escape from the violent situation. To be able to do so, she must learn new skills.

Domestic violence is completely democratic. It is not restricted to any particular colour, culture, ethnicity, marital status, age, or social class.

Domestic violence is common and the implications of non-intervention are serious, yet many health care providers are reluctant to screen for abuse. Violence against women occurs within a social context that often denies or

minimises the significant impact of abuse on the lives of those affected. In the male dominant societies across the world, even when abuse is acknowledged the victims are often blamed for the abuse, as somehow being responsible for the perpetrators' behaviour.

Educational preparation can break down the barriers of health professionals' attitudes towards domestic violence. Educated and sensitive healthcare providers, supported by a framework of protocols in the clinical setting, together with a range of helping agencies, can respond effectively to the victims of domestic violence.

In New Zealand overseas research appears to guide the content of training programmes in domestic violence. The factors that inhibit New Zealand health workers to respond effectively to identification and intervention in domestic violence need to be researched in depth. By applying local knowledge to overcome difficulties when developing training packages, successful outcomes are more likely.

New Zealand is at the beginning of its journey to respond to domestic violence in the healthcare setting. Outcomes of training programmes and protocols at the coalface need to be scientifically evaluated for effectiveness. Evaluative research needs to consider both the victims of abuse and the health professionals' opinions.

Overseas studies suggest a high representation of abused persons in the mental health setting. The actual prevalence of this situation in New Zealand is largely speculation. Research into the usage of mental health services by

individuals affected by domestic violence would clarify the size of the problem. Once the prevalence is known, strategies for appropriate management can be explored.

## **Chapter 3**

### **Domestic Violence in pregnancy**

#### **Introduction**

Many pregnant women across the world experience domestic violence with its potential for devastating effects on the mother and her unborn baby. The aim of this chapter is to examine prevalence rates and to critically explore why some studies expose higher rates than others. The issue of universal screening for domestic violence and the direct and indirect health consequences of this phenomenon are also investigated in this chapter.

Pregnancy may act as a stimulus for the onset of domestic violence or an escalation of violence may occur in an already abusive relationship (Hillard, 1985; Webster et al., 1994; Walker, 1979). Pregnancy is a time when many women feel particularly vulnerable, a state which abusive men often exploit (Stark & Flitzcraft, 1995). Gelles (1988) critically examined the data collected from telephone interviews conducted with individuals from 6002 households to explore whether pregnant women were at greater risk of abuse. An unanticipated finding from the survey was that pregnant women are not "... statistically at special risk of violence..." but "... that pregnant women enjoy no special relief from the threat of violence either." (p. 846).

## **Prevalence: Determining the extent of the phenomenon of domestic violence in pregnancy**

Routine antenatal care almost always includes screening<sup>1</sup> for a number of conditions, e.g. hypertensive disorders, diabetes and placenta praevia, but the physical safety of the woman hardly ever receives any attention (Helton, McFarlane, & Anderson, 1987). Domestic violence is an under-recognised and thus under-reported phenomenon, occurring within the privacy of the home (Campbell et al., 1995; Hillard, 1985). Campbell et al. (1995) highlight the woman's reluctance to identify her intimate partner as her abuser as a possible reason why accurate estimates of the frequency of abuse are so difficult to measure.

Screening for physical abuse in pregnancy reveals a prevalence range of 3.9% (Hillard, 1985) to 17% (McFarlane et al., 1992) as reported in mainly North American literature. The prevalence of non-pregnancy abuse ranges from 8% reported in Canada (Canadian Centre for Justice Statistics, 2000) to 29.7% reported in an Australian research study undertaken by Webster et al. (1994). In a study of female victims of male partner violence presenting at an emergency department, 10% were found to be pregnant. Eighty six percent of these pregnant women had suffered previous assaults and 40% had sought previous medical treatment (Berrios & Grady, 1991).

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<sup>1</sup> Strictly speaking the term screening is a biomedical one and usually relates to the application of a diagnostic test to individuals at particular risk of a specific disease. Its use can therefore mislead. Domestic violence is not a 'disease' but a social problem the solution which is to be found in the wider community. However because the term is routinely used in the literature, it is used in this dissertation.

Hillard (1985) found 21% of the 742 women in her retrospective American study reported an increase of abuse during pregnancy, whereas 36% and 43% of women in the same study respectively claimed that the abuse decreased or stayed the same. This is in keeping with the 23.7% of abused Australian women in the Webster et al. study (1994), who reported an increase in abuse during pregnancy and the 25% of women in the research done by Richardson et al. (2002) in the United Kingdom, who indicated that the violence they experienced during pregnancy was worse than before.

If violence does occur, it tends to escalate during pregnancy. This may make women more likely to admit to abuse and accept help later in pregnancy (Berenson et al., 1994; Campbell et al., 1992; McFarlane et al., 1999; McFarlane & Gondolf, 1998; Parker & McFarlane, 1991; Smith et al., 1998).

A large number of overseas prevalence studies on domestic violence in pregnancy are found in the published literature. These studies have been performed in different countries using different research tools and samples. Lessons can be learnt from how subtle differences in research methodologies and screening tools influence stated prevalence rates. My aim is to examine some of those lessons in the following section.

The terms “domestic violence” and “intimate partner violence” are often used interchangeably in the literature as if they are one and the same. This is not quite the case. Berenson et al. (1991) found 92% of the women who disclosed abuse occurring some time in their life, reported a single perpetrator. Of these women, eighty two percent identified their intimate partner as the abuser. In

Webster et al.'s (1994) study 80.7% of the identified perpetrators were the abused women's current or previous intimate partner. Helton et al. (1987) screened 290 pregnant women for intimate partner violence occurring at some time in their relationships and found a physical abuse prevalence rate of 15%. Berenson et al. (1991) used the Helton et al. questionnaire, but adapted the abuse-focused screen to include any significant other and not only the intimate partner. This resulted in a reported physical abuse prevalence rate of 20%.

The perpetrators of abuse other than the intimate partners in the Berenson et al. (1991) study included a parent (n=1), brothers (n=2), brother-in-law (n=1) and one non-family member. Some of the women in Berenson's study reported being abused by more than one person. These abusers were identified as being parents and boyfriends (n=2), both parents/guardians (n=4), ex-spouse and current boyfriend (n=1), and boyfriend and sister (n=1). It is therefore recommended that health professionals screen women with a questionnaire designed to be inclusive of all perpetrators, not only the intimate partner.

Despite the use of a narrower questionnaire in the study by Helton et al. (1987) they revealed a higher prevalence figure for abuse during pregnancy. Helton et al. reported 8% abuse during pregnancy, whereas Berenson et al. found a 5.6% pregnancy abuse rate. On deeper analysis, the following emerged: The two studies were comparable in terms of the research participants (White, African-American and Hispanic women) and their age ( $\geq 18$  years). Helton et al. included women from a private as well as a public antenatal clinic and Berenson et al. recruited subjects from a public antenatal clinic. The major difference, however, in the two studies was the gestational age at which the women were

screened. Berenson et al. questioned the research sample at around 22 weeks, whereas Helton et al. screened at 32 weeks. The argument against only screening in early pregnancy is supported by the result of another American study (Hillard, 1985). Hillard found a prevalence rate of abuse during pregnancy of only 3.9% in spite of abuse-focused questions that included all possible perpetrators. This may be because forty three percent of the research sample in Hillard's study were screened for abuse at or before 13 weeks gestation.

It is reasonable to conclude that the most accurate prevalence rates of domestic violence in pregnancy will be obtained by screening women at a more advanced gestational age, as abuse may be underestimated if the woman is interviewed only in early pregnancy. For example, in Webster et al's (1994) study, the initial prevalence rate of 5% of women who experienced abuse in the current pregnancy rose to 8.9% at 36 weeks when late-presenting women were included. Furthermore, abuse-focused questions must be formulated to capture whoever the perpetrator might be and not only intimate partners. Norton, Peipert, Zierler, Lima & Hume (1995) concluded that women would disclose more readily if they are asked more than once during their pregnancy.

Several studies discussed in the following section incorporated all of the above principles, (e.g. abuse-focused questions and a wide questionnaire to capture all perpetrators) and also included three screening points in their research methodology. These researchers based their study designs on the findings reported in the literature, that violence can start or escalate during pregnancy. These North American studies have reported prevalence rates of more than double that of Helton et al. (1987) and Berenson et al. (1991). McFarlane,

Parker, Soeken and Bullock (1992) reported a 17% abuse rate. Parker, McFarlane et al. (1993) found 15.9% of their study population admitted to being abused and McFarlane, Parker and Soeken (1996) described a 16% prevalence rate.

The three above-mentioned studies are comparable to those of Helton et al. and Berenson et al. in terms of sample, number of participants and settings. A major difference was in the frequency of screening for abuse. McFarlane et al. (1992); Parker et al. (1993) and McFarlane et al. (1996) all screened once in each trimester of pregnancy. The researchers reported that many women did not admit to abuse at the first interview, but did so at a subsequent visit. In fact Berenson et al. (1991) had speculated that this might be the case. They commented that "if the interview had been conducted later in gestation, a higher prevalence ... may have been detected ... The most effective screening program would include more than one interview in pregnancy." (p. 1493).

There was another important factor common to all three studies. Each study used interviewers who were responsible for the provision of ongoing routine antenatal care to the women who participated.

The high prevalence rates found in the mentioned studies highlight two important intertwined issues. Firstly, they support the practice of screening more than once for domestic violence, including questioning at a more advanced gestational age. The second important issue to consider is the question of who should carry out the screening. The findings from the above studies would support the view that the midwife providing routine antenatal care is well placed

to perform this task.

### **The case for universal screening**

Over 50% of the women studied by Parker, McFarlane and Soeken (1994) and 87% of those in Helton et al.'s research (1987), who reported abuse in the year prior to their pregnancy, also experienced abuse during the current pregnancy. Prior abuse can therefore be considered a primary predictor of abuse during pregnancy (Helton et al., 1987; Parker et al., 1994; Parker, McFarlane, Soeken, Torres & Campbell, 1993). Hillard (1985) also reported that current abuse is a clear risk for future abuse.

Abuse during pregnancy is of greater severity and intensity compared to abuse experienced prior to pregnancy or abuse perpetrated by a person other than a woman's partner (Campbell et al., 1992; McFarlane et al., 1999). This increased risk of more intense violence during pregnancy supports the case for universal screening of all women during each antenatal encounter to facilitate early detection (Campbell et al., 1992; McFarlane et al., 1999).

Campbell et al. (1992) agree that questions about battering should be asked at every visit, as it is unclear at what point during pregnancy the battering is likely to be triggered. In addition to creating new stressors, pregnancy or the birth of a child, may intensify pre-existing strains such as financial hardship and chronic poverty (Jasinski, 2001). First time parents or a couple expecting an unwanted or unplanned baby are likely to experience even more stress. It is fairly self-evident that pregnancy can result in an increased risk for violence. Chart reviews in Hillard's study (1985) revealed entries by nurses and social workers

commenting on ambivalent feelings between partners about the pregnancy. This discord will have added to any existing marital conflict. A number of these women visited emergency clinics after episodes of physical violence in pregnancy.

Based on findings from interviews with 51 pregnant abused women, Campbell, Oliver and Bullock (1993) proposed four categories of abuse that might explain the different rationales for violence from abusive partners:

1. Jealousy toward the unborn child
2. Anger toward the unborn child
3. Pregnancy specific violence, not directed to the child
4. "Business as usual".

It is therefore not surprising to find that abuse can occur for the first time during pregnancy. In Australia, the 1996 Australian Bureau of Women's Safety Survey found that of the women who reported abuse, 42% were abused when pregnant and 20% of them for the first time. It has also been reported that violence is more prevalent among women who have mistimed or unwanted pregnancies and among women seeking abortions (Goodwin, Gazmararian, Johnson, Gilbert, & Saltzman, 2000).

In the light of evidence that pregnancy itself may pose a risk to women, Bohn and Holz (1996) advocate routine screening of all women for physical and sexual abuse in a safe environment. However, not all researchers agree with universal screening. Newberger et al. (1992) encourage health care personnel to only ask those women they suspect of being abused. Newberger et al's view

is shared by a number of other North American bodies.

In 1996, the US Preventative Services Task Force concluded that there is insufficient evidence to recommend for or against specific screening tools to detect domestic violence. It was suggested, however, that clinicians should be alerted to signs of abuse and to screen if indicated. The American Medical Association's Council on Scientific Affairs (1992) recommends routine screening with a structured approach and appropriate referral to community agencies. The Society of Obstetricians and Gynaecologists of Canada (SOGC) (1996) does not directly recommend routine screening, but advocates a high level of suspicion and provides a brief set of screening questions to be used as part of the history taking. The American College of Obstetricians and Gynecologists (1992) takes a similar approach.

The Canadian Task Force on Preventative Health Care (2003) recently issued the following recommendation:

There is insufficient evidence to recommend for or against routine universal screening for violence against either pregnant or nonpregnant women ...; however, clinicians should be alert to signs and symptoms of potential abuse and may wish to ask about exposure to abuse during diagnostic evaluation of these patients. (p. 582).

Altogether this is a powerful body of opinion. However, the reasoning used to reach the conclusion is not that screening is ineffective or unreliable, but rather that the evidence for effective intervention is weak. Accordingly, the position is adopted that screening is of limited value if one is helpless to be of assistance to women who screen positive. However, it is reasonable to take a contrary view. Until the nature and size of the problem is brought to light, there will never

be sufficient attention and resources directed to intervention strategies.

### **Health consequences of domestic violence**

Partner abuse plays a significant role in maternal and perinatal mortality and morbidity (Bewley & Gibbs, 1991). Multiple causal pathways link domestic violence and adverse health outcomes for both the woman and her baby (Newberger et al., 1992). Sammons (1981) concluded that the "... pregnant woman who is beaten by her mate is in a high-risk situation in which not only her own health but that of her fetus are threatened." (p. 250).

Unborn babies are under threat when their mothers are subjected to domestic violence and subsequent neonatal outcomes may be less optimal. Physical violence if directed to the woman's pregnant abdomen potentially could harm the foetus. Domestic violence also tends to adversely affect pregnancy outcome in a more indirect way. The pathways by which abuse threatens the mother and her foetus are explored in the next two sections.

#### Direct causal pathways

Direct causal pathways between physical victimisation and adverse obstetric outcome could operate through a variety of biological mechanisms. Both maternal and fetal wellbeing are at risk in cases of assault involving direct abdominal trauma. Berenson et al. (1991) found in their study of 501 pregnant women that 27% of those women subjected to physical abuse during pregnancy had their abdomens hit, compared to 14% of the women who experienced abuse outside pregnancy. In Hilberman and Munson's (1977-78) study of 60

battered women, pregnancy led to a change in the pattern of abuse. The abdomen replaced the face and breasts as a principal target for violence.

Pregnancy itself influences the impact of trauma. Maternal physiology is altered and the presence of the fetus creates a second potential victim. During the first week after fertilisation and before implantation, the conceptus is relatively resistant to noxious stimuli, but after implantation any traumatic disturbance of the placenta's anchoring villi can result in fetal compromise or loss (Pearlman Tintinalli, & Lorenz, 1990). After twelve weeks the uterus becomes an abdominal organ and the uterine wall, which is initially thick, thins out during the third trimester due to the growing fetus. Blunt abdominal trauma can therefore lead to retroperitoneal bleeding, abruptio placentae and/or premature rupture of membranes. Sharp abdominal trauma, on the other hand, may lead to laceration of the uterus, fetus and maternal bladder (Colburn, 1999<sup>2</sup>). When the myometrium is injured and decidual lysosomes are destabilised due to uterine trauma, arachidonic acid is released, which can cause uterine contractions (Pearlman et al., 1990).

Fetal membranes could rupture due to direct trauma, causing the onset of labour or may lead to chorioamnionitis. Prior to 24 weeks gestation, loss of liquor volume may predispose the fetus to pulmonary hypoplasia or orthopaedic deformities. Fetal anaemia or hypovolaemia may be the result of haemorrhage due to trauma to the placenta. Changes in the fetal heartbeat (e.g. bradycardia,

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<sup>2</sup> Around the twelfth week of pregnancy, the urinary bladder becomes an abdominal organ and therefore is more prone to injury (Colburn, 1999).

tachycardia, decelerations, decreased beat to beat variability) may be the first indication of disruption in fetal homeostasis after trauma (Pearlman et al., 1990).

Morey, Begleiter and Harris (1981) described the case of a pregnant woman who received a hard blow to the abdomen at 29 weeks gestation. She started with spotting, ruptured her membranes spontaneously and advanced into labour. She birthed a breech baby with a badly bruised left arm, neck and shoulder and a swollen left eye. On the second day of life a massive intraventricular bleed was identified on an echo-encephalography. When the baby died a postmortem was performed and on autopsy "... the cranial contents burst forth when the skull was opened." (p. 1294). Furthermore, two small haematomas were evident in the liver and sub-pleural haematomas were found in the left lower lung. The authors recommended "... increased suspicion of domestic trauma as one cause of poor outcome for pregnancy..." and they considered it a "... delusion to think that the fetus is exempt from the hazards of an environment in which child abuse and spouse abuse are commonplace." (p. 1295).

Goodwin and Breen (1990) studied "pregnancy outcome and fetomaternal hemorrhage after noncatastrophic trauma" and found complications were more common after assault than after motor vehicle accidents. They also ascertained that those complications were as a rule more severe than for any of the other mechanisms of injury studied. The authors concluded, "... victims of domestic violence during pregnancy deserve special attention. Not only is this under recognized problem a harbinger of child abuse, but our data suggest that the

incidence and severity of morbidity may be greater for this type of trauma." (p. 670).

### Indirect causal pathways

An indirect causal pathway between abuse and adverse pregnancy outcome is to be found in the woman's ongoing victimisation<sup>3</sup> experience (Newberger et al., 1992). A number of mechanisms which stem from the abusive environment the pregnant woman finds herself in day after day, adversely affecting birth outcome.

Victimisation can lead to elevated stress, isolation from the health system during pregnancy and behavioural risk-taking such as substance<sup>4</sup> use, all postulated as possible causal mechanisms linked to diminished fetal growth and early onset of labour (Newberger et al., 1992; Newton & Hunt, 1984). Istvan (1986) concluded after critically reviewing the literature that enough evidence exists to link maternal emotional distress with poor reproductive outcome. In the course of his exploration of stress, anxiety and birth outcomes, Istvan (1986) ascertained that maternal emotional distress often increases the frequency of those behaviours which pose a risk to neonatal and obstetric wellbeing - for

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<sup>3</sup> Victimization is defined in this context to include physical assaults; control techniques used by the perpetrator, including verbal intimidation, also emotional abuse including the continuous challenge of the abused woman's competency as a mother and person (Newberger et al., 1992).

<sup>4</sup> Substances are defined for the purpose of this study, as the use of cigarettes (tobacco), alcohol and/or illegal drugs.

example, smoking and/or alcohol consumption.

Zuckerman, Amaro, Bauchner and Cabral (1989) found an association between depressive symptoms and adverse health behaviours in their sample of 1014 pregnant women. The researchers commented on how stressors in the woman's environment may lead to depressive symptoms, which in turn influence health behaviours such as smoking, alcohol consumption and poor nutrition, which in turn influence pregnancy outcomes.

Numerous studies in the literature have indicated that women subjected to abuse may self-medicate on substances in order to cope with the violence in their lives (Amaro, Fried, Cabral, & Zuckerman, 1990; Edwards & Sims-Jones, 1998; Martin, English, Clark, Cilenti, & Kupper, 1996; Sales & Murphy, 2000). A young woman recounted her experience in the following words: "With the stress of having to care for a young child, bills, a violent relationship and being pregnant, I felt smoking was my only link to sanity." (Lara's story in Smokechange, 2001, p. 2). The use of drugs as a survival strategy to cope with poverty, abuse and poor health was demonstrated in the 126 interviews Sales and Murphy (2000) conducted in their qualitative study. The researchers concluded that: "Drug intoxications temporarily masked the emotional and physical pain of abuse, diminishing daily hardships and suffering. Drug use allowed women to cope and forget, if only for a short time." (p. 9). Amongst the sample of women observed by Webster, Chandler and Battitusta (1996) it was found that the more severe the abuse, the higher were the rates of smoking and alcohol abuse amongst the abused women.

Not only are victims of domestic violence significantly more likely to use substances (compared to non-abused women), but continuation of substance use during the pregnancy period is also significantly more likely for abused women (Edwards & Sims-Jones, 1998; Martin et al., 1996; Sales & Murphy, 2000). The effects on the offspring of mothers with a history of substance use during pregnancy have been studied over decades. The results have consistently revealed suboptimal birth outcomes. In 1957 for example, Simpson and Loma reported the following: "It is apparent that there is a relationship between the incidence of prematurity and the number of cigarettes smoked per day. The more cigarettes smoked each day, the higher the prematurity rate." (p. 814). The same researchers found in their study of 7499 participants, an incidence of preterm births described as "approximately twice as great for smoking mothers as it is for non-smoking mothers." (p. 814). Shiono, Klebanoff and Rhoads (1986) examined gestational length in a sample of 30 596 pregnant women and reported that preterm births were 20% more likely to occur in women who smoked at least one packet of cigarettes per day and about 60% in women who smoke more. The result of Shiono et al.'s study indicate a "... probable effect of smoking on the time of parturition, which is additional to its well-known effect on intrauterine growth retardation." (p. 82).

Women abused during pregnancy are also more likely to smoke, both factors being linked to low birthweight (McFarlane et al., 1996). This finding is in keeping with that of Butler, Goldstein and Ross (1972) who described a reduced birth weight by 170g, as well as a 28% increase in late fetal and neonatal mortality rates in their study of 16 994-singleton births. These findings persisted even after controlling for confounding variables.

The effect of alcohol intake as a behavioural risk in pregnancy has been the focus of a number of studies. Hingson et al. (1982) conducted their study of 1690 mother/child pairs to assess the impact of maternal alcohol consumption on fetal development. The researchers found that drinking prior to pregnancy was significantly related to shorter gestation. This is in contrast with the findings of Shiono et al. (1986) who found that daily consumption of alcohol was, after adjustment for confounding variables, only of borderline significance in preterm births. Mills, Graubard, Harley, Rhoads and Berendes (1984) studied the effect of alcohol intake during pregnancy on birthweight outcomes. The researchers found the percentage of babies born below the tenth percentile of weight for gestational age, sharply increased with an increase in alcohol consumption. Mills et al. (1984) found a reduction of 165g in mean birthweight in those babies born of mothers consuming three to five alcoholic drinks per day. This is in keeping with an earlier study undertaken by Ouelette, Rosett, Rosman and Weiner (1977), who reported major differences in the growth measurements of the babies studied. The authors recorded a lower birthweight as well as reduced birth length in the neonates exposed to large quantities of alcohol (more than five drinks on one occasion), compared to the babies born to mothers who were classified as abstinent.

Drug use in pregnancy also consistently reveals suboptimal birth outcomes. Since self-reporting on drug use is unreliable, this form of behavioural risk-taking is difficult to recognise (Frank et al., 1988; Hingson et al., 1986; Slutsker, Smith, Higginson, & Fleming, 1993; Zuckerman et al., 1989). Frank et al. (1988) found in their study that on the basis of interview alone, 26% of cocaine users would have been misclassified as non-users, because they were identified

solely by means of urine assays. The researchers, however, argued that reliance on urine assays alone would also miss a number of users, as the interval for obtaining cocaine metabolites in the urine of infrequent users, for example, is relatively brief. In order to maximise identification of drug use during pregnancy, Frank et al. (1988) suggested that both self-reporting and urine assays should be utilized. Slutsker et al. (1993) found routine questioning for substance use habits positively identified 6% of drug users, but only 3% of drug users were detected in cases where health professionals relied on clinical judgement only.

Clinical studies in pregnant women have identified the negative effects of drug use on fetal growth and development. Zuckerman et al. (1989) investigated the neonatal outcome in pregnancies where marijuana and cocaine were regularly used. After controlling for confounding variables, the researchers concluded that the use of either of these substances during pregnancy is associated with impaired fetal growth. Fried, Watkinson and Willan (1984) found a statistically significant reduction of one week in length of gestation among the marijuana users in their study of 583 women. The researchers, furthermore, noted a dose dependent effect on gestation length among the heavy marijuana users ( $\geq 5$  cigarettes / week).

Some studies have reported possible teratogenic effects on the offspring of those mothers who chronically used alcohol in pregnancy. The term Fetal Alcohol Syndrome was given to babies born exposed to alcohol in utero, who were born with a recognisable pattern of multiple congenital anomalies, which are - micro-encephaly, micrognathia, cardiac defects, prenatal growth

retardation and developmental delays (Ouellette et al., 1977). Day et al. (1989) prospectively studied the effects of antenatal exposure to alcohol on infant growth and morphologic characteristics in a cohort of 650 pregnant women. The researchers found a "... significant association between the amount of maternal alcohol consumption in the first trimester of the pregnancy and the occurrence of minor physical anomalies and fetal alcohol effects." (p. 539). Day et al. (1989) acknowledged that the women in their study who used alcohol in heavier quantities also reported the use of other substances such as Marijuana. Interestingly, Hingson et al. (1982) found in their study that women who used Marijuana during pregnancy, compared with non-users, produced smaller infants who were nearly five times more likely to display the features compatible with Fetal Alcohol Syndrome. Surprisingly, Hingson et al. (1982) found that no level of drinking<sup>5</sup>, whether prior to or during pregnancy, was significantly related to congenital abnormality, growth measures at birth or features compatible with fetal alcohol syndrome.

In conclusion, the literature not only describes a link between emotional distress and poor reproductive outcome, but other indirect causal pathways between abuse in pregnancy, the tendency of violence victims to use substances and the subsequent risk of adverse birth outcomes. Based on the results of their study, Zuckerman, Amaro, Bauchner and Cabral (1989), suggest that health professionals should endeavour to identify depressive symptoms in their pregnant clients and understand the potential relationship with substance use.

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<sup>5</sup> Level of drinking was interpreted as quantity of alcohol consumed per day and calculated per participant's body weight in kilograms.

The strong link between abuse and substance use in the evidence suggests the value of careful inquiry into substance use habits when a history of violence is revealed and into a possible history of abuse if substance use is present (Jacobson & Richardson, 1987). Intervention approaches should be directed towards assisting the woman to reduce environmental stress and facilitate the development of behavioural strategies to reduce harmful behaviours.

The association between domestic violence and low birthweight infants is now considered in more detail.

#### **“The birthweight/battering connection” (Bullock & MacFarlane, 1989)**

Battered women are two to four times more likely than non-abused women to give birth to low birthweight babies (Bullock & MacFarlane, 1989).

Over decades, researchers have attempted to isolate the risk factors resulting in low birthweight. The complexity of the issues has made it very difficult. According to Istvan (1986), “pregnancy is embedded in a matrix of social and psychological factors on one hand, and a series of structural, endocrinological, and metabolic changes on the other.” (p. 342). Correlations between variables rather than causes of low birthweight have been discovered.

Eisner, Brazie, Pratt and Hexter (1979) examined the health records of a total of 3 101 117 single live births in the USA during 1974. A subset of 505 243 records with complete information on predetermined criteria were ultimately included in the study. When other factors were held constant, the researchers found that “... race [e.g. not white], previous reproductive loss, short

interpregnancy interval, out-of-wedlock birth, no prenatal care, and maternal age under 18 years or over 35 years increased the risk of having a low birthweight infant (<2501g)." (p. 887).

Eisner et al. (1979) mentioned "previous reproductive loss" as a risk factor for producing a low birthweight baby. This is in keeping with the findings of Curry, Perrin and Wall (1998) who found poor obstetric history, including previous low birthweight (LBW) infants, preterm delivery, miscarriage and foetal/neonatal loss, not only to be significantly linked to LBW, but also to be a significant predictor of abuse.

Bullock and McFarlane (1989) studied battered women in both public and private clinics and reported that significantly more LBW infants were born to the abused cohort. A very similar finding emerged from the literature review and meta-analysis undertaken by Murphy, Schei, Myhr and Du Mont (2001). The authors systematically reviewed 14 studies and selected eight for the meta-analysis, most of which represented study populations with lower socio-economic status. Murphy et al. (2001) interpreted the finding that abused women, compared to non-abused women are likely to give birth to LBW infants as follows: "... abuse may be part of a more complex interaction of factors that contribute to LBW" (p. 1). Since the private patients in Bullock and McFarlane's study (1989) "... had not been exposed to the classic factors known to cause low birthweight, [therefore] the significant association between battering and low birthweight was easier to detect in that group." (p. 1155).

## **Summary**

Pregnancy does not protect women against physical violence. The prevalence of domestic violence in pregnancy ranges from 3.9% to 17%. Abuse-focused questions should be used to screen for domestic violence at least in each trimester and ideally at each visit. A screen inclusive of all potential perpetrators should be used.

The relation between adverse outcome of pregnancy and abuse during pregnancy may occur through direct and/or indirect mechanisms. A strong association exists between abuse and substance use and is one probable pathway affecting birthweight. Battered women may use substances as attempts to self-medicate in order to cope with emotions of fear, trauma and stress. Although the exact mechanism by which abuse affects birthweight is unclear, it is clear that a significant association does exist between these two variables.

Pregnant women and their unborn babies are vulnerable and therefore deserve effective intervention and prevention strategies from those health professionals with whom they come in contact.

Finally, most of the literature used to describe the effects and impacts of domestic violence in pregnancy and the interrelationships with substance use and birthweight, is from outside New Zealand. There is a lack of local research on the subject and the current study was undertaken in an attempt to contribute to the topic.

## **Chapter 4**

### **Research Design and Method**

#### **Introduction**

This chapter contains the detail of the research approach. A brief overview sets the scene followed by a discussion on the research design selected to answer the research questions. The consultation groundwork that was done prior to the onset of the study is discussed followed by a definition of terms and the research instruments used. A discussion of sampling, data collection and analysis undertaken in the present study completes the chapter.

#### **Overview**

In a prospective non-experimental study, the researcher set out to ask the question of what the incidence of domestic violence would be in a cohort of pregnant Waikato women aged 18 years and older. Two hypotheses were included for testing, which were:

- Domestic violence by itself during pregnancy is associated with lower birthweights.
- Domestic violence in combination with substance use during pregnancy are associated with lower birthweights.

All lead maternity carers (LMCs) in the Waikato area were invited to participate in the study in order to recruit the sample of women and to administer the AAS and demographic questionnaire. Participants were to be interviewed on three occasions – once during each trimester. Interviews were performed in the participants' own homes or at the LMC's clinic. The study was conducted from 17 August 2001 to 30 June 2002.

### **Methodology**

A prospective design was selected to guide the enquiry into answering the above-mentioned research question and testing the hypotheses. This design is embedded in the positivist paradigm, whereby the researcher is led through a logical series of steps guided by a pre-specified non-flexible plan.

The prospective design allows the measuring of specified variables over a period of time. The variables are defined later in this chapter. The study began with the examination of the presumed cause (domestic violence) as it occurs in the lives of the participants. The study moved forward in time to observe presumed cause of effects (substance use and birthweight). This design is considered stronger than the retrospective approach due to the level of control over confounding variables the researcher can set in place prior to measuring the variables.

The prospective design in this study included some degree of control over the research situation to minimise bias and to maximise validity. Control was exercised by educating the LMCs in administering the research instruments. A

weakness of this non-experimental design with data collection occurring within natural settings, was the researcher's limited ability to minimise situational contaminants. One attempt to maintain constancy of conditions to some degree in the data collection environment was by means of training the LMCs in their communication with the participants in relation to two aspects. One aspect was that the same information about the research purpose and method was provided to prospective pregnant participants by means of a standardised information sheet.

The second and more important aspect was the instruction of the LMCs in the rigorous administration of the research tools. Within the workshop environment LMCs were taught how to interview participants using the Abuse Assessment Screen. Particular emphasis was placed on the importance of not interpreting the questions by translating them into their own words, but to repeat the exact wording on the AAS until the participant understood. This measure minimised the threat of instrumentation<sup>1</sup>.

Prior to applying the prospective design in practice, consultation with stakeholders was undertaken. This process is discussed in the following section.

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<sup>1</sup> "Instrumentation threats are changes in the measurement of the variables... that may account for changes in the obtained measurement." (LoBiondo-Wood & Haber, 1998, p. 165).

## **Research groundwork**

### Consultation

Prior to submission of the research proposal for ethics approval, consultation took place with Maori stakeholders in February and March 2001. Maori stakeholders were consulted about the cultural appropriateness of the research design and method. The researcher's intentions related to the findings of the study were also discussed. The Maori individuals expressed their approval of the design. They also verbalised appreciation of my intention to give Maori statistics back to Maori to use, as they deemed fit.

Consultation was extended to local helping agencies - the Hamilton Abuse Intervention Project (H.A.I.P) and Women's Refuge. These two organisations play significant roles in helping and counseling abused women. I consulted with them on the appropriateness of the research instruments and the availability of their resources, should the study unleash a great demand for their services. Both the mentioned agencies expressed excitement over the prospect of midwives becoming involved in screening and intervening in domestic violence. H.A.I.P and Women's Refuge provided me generously with information pamphlets and 24-hour emergency numbers to hand to participating LMCs.

## **Ethical Issues**

### Protection of human rights<sup>2</sup>

This research study had the same ethical implications as any other study involving humans. Domestic violence is a very sensitive issue and may cause potential harm to the participant should her partner discover that she disclosed their violent relationship. However the same situation would arise if the woman reveals the abuse to a friend, family member or her General Practitioner. Measures were built into the study to protect abused women. Data collection, for example, did not take place if the partner or any child over the age of two years was present, as recommended by McFarlane et al. (1996) and Parker et al. (1994). When abuse was revealed and the woman was introduced to organisations in place to help her, the benefit of her participation in the study outweighed the potential risk. These services' information leaflets containing 24-hour emergency numbers were made available to women through the study.

Measures were built into the study to ensure confidentiality and anonymity. Only the LMC knew the identity of the participating women, whereas the researcher only identified the participants by their research numbers. The LMCs also received a research number each. The reason for this was not only to link the LMC with her participants, but also to protect LMCs' identities when the result of this study are published.

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<sup>2</sup> Based on the "Ethics review for Human Research", Psychology Department, Waikato University. Working document not dated.

## Weighing the cost and benefits of the research

Brink and Wood (1998) regard this issue as a subjective one as the researcher will always be inclined to favour the research. They suggest three areas to be addressed in order to reduce subjectivity. I applied the three areas to the study as follows:

### Potential to contribute to knowledge

This study has the potential to contribute new knowledge to local midwives about the incidence of abuse in their part of New Zealand, potentially leading them to adjust their practice to include regular screening for abuse. Furthermore, the link between domestic violence and substance use would be beneficial to midwives to be mindful of the influential dimension of the one when screening for the other. The knowledge gained from the findings from this study could further inform midwives' practice regarding the potential affects of domestic violence and substance use on birthweight.

### Practical value to society

The cycle of abuse spirals down from one generation to the next, leaving its scars not only on individuals, but also on a whole segment of society. If the cycle of abuse can be interrupted, society would be healthier in generations to come.

## Benefits to the participants

If the abused woman can be empowered to break out of the violent cycle, the potential benefit to the participant is enormous.

It was therefore reasonable to conclude that the problem under study was worth investigating. Not only was the research considered to be potentially beneficial to the abused individual, but also to her and the wider society. The benefits of the research outweighed the potential cost. An example of such cost would include the risk to the woman when her abusive partner or family member discovers the disclosure of the violence.

## Power issues in the research

The researcher is in a powerful position performing research and this has the potential to disempower participants. However, I believe that the research had the potential to empower the participants. If an abused participant disclosed the violence to which she was subjected in her relationship and embraced professional help through the appropriate agencies, she would then have been in a position of power over her situation. If an abused woman participated in the study, but chose not to make use of helping agencies at that time, she would still have possessed more power than before as she could reach out for help at a later stage.

The researcher gathered ethnic information as an integral part of the sample demographics. Further analysis of the incidence of abuse per ethnic group

could have been done, but this has the potential to disempower some groups if the knowledge is misused in the public arena. Cultural group breakdown was used solely to describe the groups and subgroups of the research sample.

Ngahiwi Tomoana commented on this issue:

One of the main things is that we have always been dependent on other people's statistics when they deliver services to Maori. And we have always been entirely dependent on their perspectives of those statistics. ... we need to develop our own in order to implement strategies. (Teariki, Spoonley & Tomoana, 1992, p. 4).

### The research process and the Treaty of Waitangi

The current study aimed to honour the principles of the Treaty of Waitangi in the research process. The researcher anticipates the findings of the study to contribute to knowledge potentially leading to Maori health gain. The three principles of the Treaty and how they related to the study are discussed in the following section.

#### Participation

Special attention was directed to recruit Maori midwives to participate in the study. (Unfortunately, regardless of my efforts, no Maori midwife participated.) The intention to specifically invite Maori midwives to participate was an attempt to maximise the opportunity the inclusion of Maori women.

Maori women were granted the same opportunity to be recruited as any other

woman. No special efforts, however, were made to include Maori women due to the risk of introducing bias in the sample.

#### Protection

Consultation with Maori stakeholders took place prior to commencement of the research process to ensure protection of Maori welfare. Informed consent was obtained from all participants. Participants were given the freedom to withdraw from the study at any stage with no compromise to pregnancy care.

#### Partnership

The principle of partnership was limited to the consultation phase with Maori stakeholders as described earlier in this Chapter. During the consultation phase it was agreed that copies of the research findings would be offered to Maori stakeholders to use to their benefit.

#### Ethics approval

The research proposal was submitted to the Massey University Human Ethics Committee (MUHEC) and, after minor amendments to the research protocol, final approval was granted on 3 May 2001.

The proposal was then submitted to the local Waikato Ethics Committee and it was approved on 27 June 2001. (See Appendixes H, I, & J)

## **Definition of Terms**

The following variables were studied in the research:

- Domestic violence

The operational definition of domestic violence for the purposes of my research is: A process whereby the affected woman, predominantly within an intimate relationship, experiences vulnerability, loss of power and control, and entrapment as a consequence of another person's exercise of force through the patterned use of physical, psychological, sexual or moral force causing fear. (Adapted from the definition of Smith, et al., 1998).

- Substance use

Substance use is broken down into smoking, alcohol and drugs.

Definitions are taken from The Concise Oxford Dictionary of Current English (1995):

Smoking: "...inhale and exhale the smoke of a cigarette"

Alcohol: "... a colourless volatile inflammable liquid forming the intoxicating element in wine, beer, spirits..."

Drugs (prescribed or non-prescribed): "medicinal substance, a narcotic,

hallucinogen, or stimulant..."

- Birth weight

Birthweight is defined as the weight of the newborn at birth, measured in grams.

### **Instruments**

Two instruments were used to measure the variables under study and can be viewed in Appendices A and B. The first instrument is the Abuse Assessment Screen (AAS), which is a well-established five-question screen with abuse-focused questions. Three types of abuse are screened for with the AAS. The first type of abuse is determined by Question one about any emotional or physical abuse ever before, perpetrated against the interviewee (historic abuse). Two further questions focus on physical and sexual abuse experiences in the year before the current pregnancy (recent abuse). The pregnancy abuse question screens for physical abuse since the beginning of the pregnancy and provides the option to mark the injuries on a body map. The AAS was administered in this pregnancy in a face-to face interview by the LMC as the participant's chosen primary provider of pregnancy care.

The second instrument is a questionnaire, developed by the researcher to collect data on the participants' demographics and substance use habits. The research instruments are discussed in more detail in the following two sections. The actual applications of the instruments in the study are discussed in this

chapter in the section called "Obtaining and recording the data" (p. 89).

#### Reliability and validity of the Abuse Assessment Screen (AAS)

The Nursing Research Consortium on violence and abuse designed the Abuse Assessment Screen (AAS) (Parker & McFarlane, 1991). The AAS was developed for use in both pregnant and non-pregnant women. Thus the pregnancy question (Item 3) can be included or deleted as required. The contents of the tool were agreed to by a panel of 12 American nurse researchers.

Due to the fact that no total score was computed for reliability and criterion-related validity for the AAS, responses to individual items on the AAS were compared with scores from three other scales<sup>3</sup> (Soeken, McFarlane, Parker & Lominack, 1998). Soeken et al. (1998) used a test-retest approach. Data of 280 women who reported abuse and a random sample of 280 non-abused women were selected as a control group from a large study of 1203 pregnant women. Forty-eight of the original 280 abused women were interviewed again and an 83% agreement was obtained. To retest the reliability, another 40 women from the same study, but from another antenatal clinic, were interviewed a second time and a 97.5% agreement was found (Soeken et al., 1998). Validity was assessed by means of hypotheses testing. Abuse on the AAS was significantly positively correlated with high scores on the three mentioned scales. Significance was at the p<0.01 level.

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<sup>3</sup> Conflict Tactics Scale (Strauss, 1979), Index of Spouse Abuse (Hudson & McIntosh, 1981), Danger Assessment Scale (Campbell, 1986) in McFarlane, Parker, & Soeken, 1996.

The AAS has been widely used. Comparable data has been obtained from numerous research studies (Curry, Doyle & Gilhooley, 1998; Martin, et al., 1996; McFarlane, et al., 1996; McFarlane & Soeken, 1999; Norton, et al., 1995; Parker, et al., 1994). It has also been shown to be effective in the detection of domestic violence. Norton et al. (1995) assessed battering in pregnancy using two screening methods and found that the AAS detected more violence in all categories compared to the standard interview. The reliability and validity of the AAS have been demonstrated, therefore minimising measurement error in the study (Soeken et al., 1998).

A threat to internal validity can be caused by instrument administration. This was addressed through clear instruction to the midwives on how to administer the AAS. External validity could be threatened by the participant's reaction to the interviewer. This risk was minimised, as it was a familiar and trusted figure - the LMC, and not a stranger, who conducted the interviews.

### Self-report Questionnaires

The researcher developed a questionnaire to capture the participants' demographic data and substance use habits. The questionnaire consisted of seven questions. The aim of the first four questions was to collect demographic data (marital status, age, family size and ethnicity). The remaining three questions focused on substance use and amount, if any. The questionnaire was scrutinised by experts in the School of Health Sciences at Massey University and approved by the Ethics Committees mentioned before.

The questionnaires were self-administered at the end of every interview. The problem of response bias, where participants distort responses in order to portray a more favourable image, was minimised by total anonymity of the information collected on the questionnaire. The privacy provided to participants to complete the questionnaires, should have encouraged frankness and honesty.

## **Method**

The LMCs played a fundamental role in the research method. They acted as "research assistants" responsible for recruitment of participants and interviewing for data collection. The recruiting and training of the LMCs prepared them for data collection and are discussed in the first section to follow. Recruitment of the research sample, data collection and data analysis complete the discussion on method.

### Recruiting and training the interviewers

All midwife LMCs – urban or rural - who had access agreements to render services at Waikato Hospital were invited to participate. LMCs are defined in the Section 88 Maternity Notice pursuant to the New Zealand Health and Disability Services Act, 2000. Midwife LMCs were chosen, as they are responsible for the majority of maternity care in the current health system. LMCs reflect the bicultural population of New Zealand and were in a favourable position to recruit both Maori and Pakeha women into the study.

The New Zealand situation whereby the majority of women access pregnancy services through midwife LMCs differs from that found in many other countries. In those places large antenatal clinics offer opportunities to access and recruit randomised samples. In this study convenience sampling<sup>4</sup> was used as the selection procedure and took place through networking with LMCs.

A two-hour workshop was held to train participating midwives. A domestic violence expert addressed the LMCs in each of the workshops and introduced them to domestic violence as a phenomenon, how to deal with disclosures and the referral process. The final session in each workshop was used to instruct LMCs on the research process and the use of the research tools. For the convenience of the LMCs the workshop was held on two occasions. The LMCs signed their consent forms to participate in the research upon completion of the training workshops.

Thirteen midwives in the LMC role completed a workshop. This relatively small number of participating midwives and the substantial recruitment target of 150 women led me to amend my research protocol to include the Waikato Hospital Caseload Midwives. Permission to do so was obtained from the Waikato Ethics Committee and Hospital authorities. Another workshop was arranged for these midwives.

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<sup>4</sup> "Convenience sampling is the use of the most readily accessible persons ... as subjects in a study" (LoBiondo-Wood & Haber, 1998, p. 253).

### Recruiting the sample

The target population for the study was pregnant women aged 18 years and older in the Waikato area, seeking midwifery care from LMCs. All pregnant, English-speaking women over the age of 18 years were eligible for inclusion in the study. Adolescents under the age of 18 years were excluded because of their uniqueness as a group with specific associated problems. Their inclusion would have extended the scope of the study excessively. Only women conversant in English were included in the study due to the complications that may have arisen should a non-English speaking woman disclose abuse, via a family interpreter.

Participating midwives were requested to approach all consecutive eligible women to invite their participation. The recruitment process commenced with the provision of an information sheet to potential eligible participants. The sheet conveyed the purpose and method of the research in clear, brief and direct language (See Appendix C).

Silva and Sorrell (1984) point out in their literature study of the ethical implications of informed consent, that individuals who are "... coping with other disruptive life situations may need more help in understanding information for informed consent..." (p. 239). The LMCs were aware of this issue. They were prepared to lead the woman through the Information Sheet, should it be required, but not to exert pressure for her to consent to participation. The researcher's contact details were also available to prospective participants so

further information could be provided upon request.

Following perusal of the Information Sheet, LMCs obtained written consent from all willing participants with their clear understanding that they were free to withdraw from the study at any stage without compromise to routine pregnancy care. No coercion was exerted on any woman to participate. The same freedom to withdraw from the study applied to the LMCs.

#### Obtaining and Recording the Data

The aim was to collect data from a participant once in each trimester of their pregnancy. Thus for each participating woman who booked early there would be the potential for three data collection points. Women booking late were not excluded, as the literature suggests that abused women often book late having been isolated by their partners because of the fear of disclosure of the violence (Parker et al., 1994). Women booking late were recruited to the study with all three interviews taking place from the time they booked to the time they birthed their babies. The same principle applied to women who were in advanced pregnancy when the study commenced.

At the beginning of the research, each participating LMC received a research number. The LMC in turn gave a number to each of her clients who agreed to participate. This number was documented by the LMC and remained unchanged throughout the duration of the study. Midwife "A", for example, interviewed participant "6" at the second data collection point. It was coded during data analysis as follows: A6.2. The allocated research numbers were the

researcher's only means of identifying the participants. The unique identifiers were regularly used through the data analysis to link AAS and questionnaires to each other as well as to the different data collection points.

Each LMC received a form designed by the researcher to assist the tracking of participants. (See Appendix F for a copy of this tool) This tool was used for the purposes of the LMC only and not made available to the researcher, as the participant's full name appeared on this form together with her allocated research number and an area to indicate the data collection points.

At the start of each data collection interview, the LMC noted the appropriate research number on the research tools. The face-to-face interview was then conducted using the AAS. Upon completion, the LMC asked the participant to complete the self-administered questionnaire. To ensure confidentiality the participant herself sealed the completed questionnaire in the numbered envelope provided. The researcher, as pre-arranged with the participating midwives, collected the completed research tools from the participating LMCs' clinics. Some LMCs brought the completed data to the Hospital where I personally received it to ensure safety and confidentiality of the data.

### **Overview of participants and data collection**

At the outset of the study 26 midwives expressed interest to take part in the research. After three workshops a total of 19 midwives (13 self-employed LMCs and six Waikato Hospital Caseload Midwives) were trained to collect data. Even though 19 midwives underwent training, only 12 (63%) actively participated and

managed to recruit 105 women.

Forty-four (41.9%) of the participating women were screened once, 33 (31.4%) twice and 28 women were screened three times. The research tools to establish the incidence of domestic violence in pregnancy and substance use habits were, therefore, administered three times in 26.6% of cases.

One of the participating midwives recruited 36 women, 34.3% of the entire sample. She screened 36% of the women three times, 44.4% twice and 19.4% once. Of the participants screened once (n=7), two (5.5%) left her care and sought midwifery services elsewhere. One of these two women disclosed historic abuse and the other reported historic, recent and pregnancy abuse.

Two midwives (16.6%) consistently screened the participants they recruited into the study once only. The one midwife recruited five women (4.8%) and the other 13 (12.3%).

The birthweights of the participants' babies were collected from the LMCs after completion of the data collection period. The LMCs provided the birthweights of the participants' babies identified with the mother's research number.

During the ten-month data collection period, I attempted to maintain communication with, and the enthusiasm of, participating LMCs by means of two newsletters (See Appendix G for copies of the newsletters). I had many personal interactions with participating LMCs in a professional capacity and we used the opportunity to discuss their experiences.

## **Data analysis**

The first step was to convert the raw material to a usable data file. This process focused on defining variables, assigning appropriate numeric codes to variables, and building a mechanism to deal with missing data. Each identified variable was entered in the "Variable View" window of the Statistical Package for the Social Sciences Version 10 (SPSS). A hard copy "code book" was kept up to date to ensure that any change got logged and served as a back up to the electronic version. Raw research data was then entered in the "Data View" window.

The research design incorporated the concept of three data collection points (DCP) for each participant. The researcher envisaged the only exceptions to three DCPs would be women who booked late and birthed after being interviewed once or twice. Participating LMCs were trained in the research process, but despite clear instruction, only 26.6% (n=28) of cases were interviewed on three occasions.

In light of the missing data in 73.4% (n=77) of the sample, only the most advanced DCP for each participant was entered, for example for those women who had three DCPs, only DCP3 was used. By entering only the most advanced DCP for each woman with more than one DCP there was a risk of losing pertinent data. For example if a woman discloses abuse occurring at the time of DCP 1, but it has ceased by DCP 3, she would have been coded as not experiencing abuse. To ensure this did not occur, I compared all available hard copies for each individual participant. I discovered that no participant, who

disclosed abuse at an early DCP, altered her state during the course of the pregnancy. The same situation applied to data regarding substance abuse and demographics. After this the data was considered clean and suitable for analysis.

Women were considered abused during pregnancy if they answered “yes” to question three of the AAS at any interview or if they reported forced sexual activity during the pregnancy. Basic demographic data and substance use habits were obtained from the self-administered questionnaires. Any amount of tobacco, alcohol or drug use was considered “positive” for substance use.

The limitation of convenience sampling and the weakness of the small sample size ( $N=105$ ) complicated statistical analyses and restricted analysis to mainly crosstabulations and graphs. The Product-moment correlation coefficient (Pearson’s  $r$ ) was used as a descriptive statistic to summarise the magnitude and direction of the relationship between two variables in the sample studied. The t-test analysis was also used to examine the difference between some of the variables. Although statistical analysis was performed, it was carefully interpreted in view of the small sample size and the limitation to generalise findings. The original research instruments, especially the AAS, were frequently referred to during the interpretation phase to describe the types and sites of abuse.

## **Summary**

After consultation with major stakeholders and approval from appropriate Ethics

Committees was obtained, the prospective non-experimental research design was operationalised. Recruited LMCs were educated in a workshop setting. LMCs were introduced to domestic violence as a phenomenon, how to deal with disclosures of violence and how to suitably referral. In the same workshops, participating LMCs were trained in the research process as the responsible parties for data collection. Special care was taken to ensure anonymity for participants, including LMCs.

Two research instruments facilitated data collection. The Abuse Assessment Screen was applied in an interview to elicit domestic violence exposure whilst the self-administered questionnaire was used to obtain demographic data and substance use habits. SPSS (Version 10) was used for entering and analysing data. The small sample of 105 women complicated the use of statistical methods. Graphs and tables were used to present some of the data.

The results of the study are displayed in Chapter 5 with a discussion of the results in Chapter 6. Discussion on the limitations of the study, conclusions and recommendations comprise Chapter 7.

## **Chapter 5**

### **Results**

#### **Introduction**

In this chapter the results of the prospective non-experimental study are presented using the research question and hypotheses as a framework. Interpretation and discussion of the results are contained within Chapter 6. The research question and hypotheses were:

- What is the reported incidence of domestic violence in a cohort of Waikato women over the age of 18 years?
- Domestic violence by itself during pregnancy is associated with lower birthweights.
- Domestic violence in combination with substance use during pregnancy are associated with lower birthweights.

#### **Overview of participants and data collection**

Twelve midwives participated as interviewers and recruited 105 women to the study. Data was to be collected from each participant on three occasions. However, the research tools to establish the incidence of domestic violence in pregnancy and substance use habits were administered three times in only 26.6%

(n=28) of cases. Due to the substantial amount of missing data only the most advanced data collection point per participant was utilised for data analysis. The characteristics of the abused and non-abused samples are displayed in the next section.

### **Characteristics of the sample**

Table 5.1 displays the demographic characteristics of the non-abused sample (n=97) and the pregnancy abused cohort (n=8). No demographic data was collected from the participating LMCs.

As seen in Table 5.1, the unmarried abused cohort viewed themselves as single (62.5%) rather than divorced/separated or in a De Facto relationship. This is an interesting finding in view of the fact that in the current study 75% (n=6) of the violence was reported as perpetrated by the intimate partner, yet women viewed themselves as not being in an intimate relationship.

The largest percentage of the non-abused sample was represented in the 30-34 year age bracket, whereas the abused women were equally distributed across all the age groups. The majority of both the non-abused sample and the abused women provided their ethnicity as NZ European/Pakeha. The NZ Maori women represented a quarter of the abused women, while comprising 12.6% of the non-abused sample.

Table 5.1 Demographic data of the pregnancy abused and non-abused cohorts

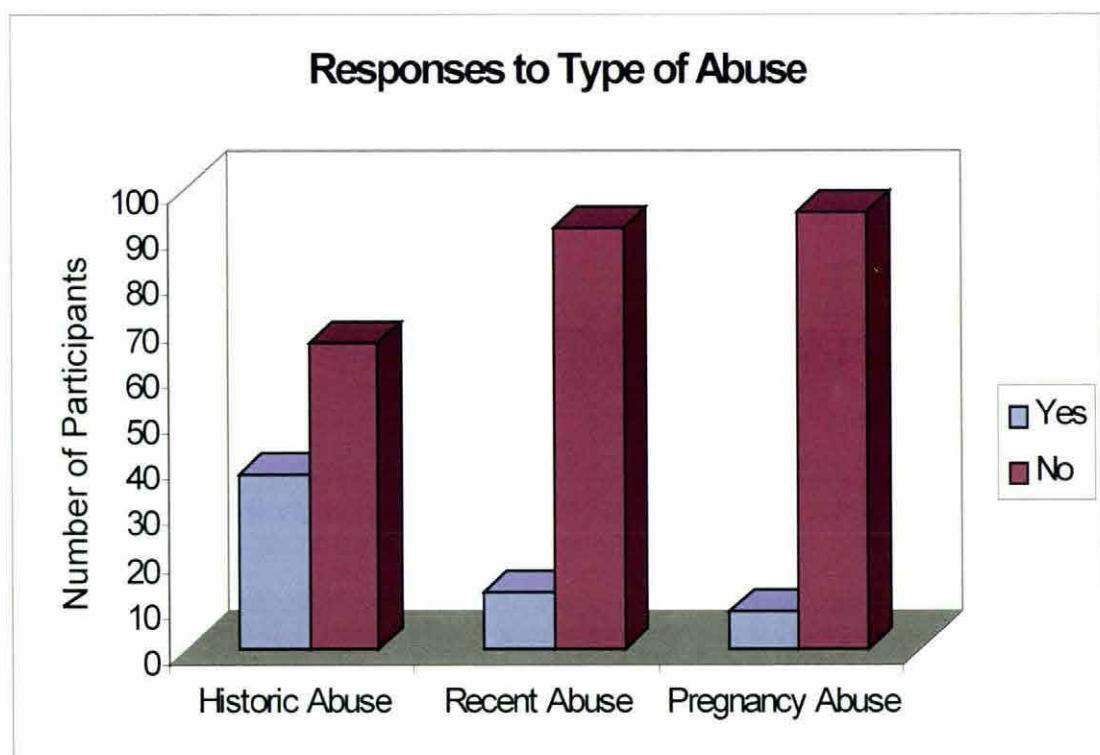
Demographic data	Non-abused {n=(%)}	Abused {n=(%)}	Total Sample {N=(%)}
Marital status (N=105)			
Married	58 (59.7%)	3 (37.8%)	61 (58%)
Single	10 (10.3%)	5 (62.5%)	15 (14.3%)
Divorced/separated	4 (4.1%)	0	4 (3.8%)
De Facto	25 (25.7%)	0	25 (23.8%)
Age in years (N=102)			
18-24	22 (23.4%)	2 (25%)	24 (23.5%)
25-29	25 (26.5%)	2 (25%)	27 (26.4%)
30-34	36 (38.2%)	2 (25%)	38 (37.2%)
35 and older	11 (11.7%)	2 (25%)	13 (12.7%)
Number of Children (N=105)			
None	32 (32.9%)	3 (37.5%)	35 (33.3%)
1-2	51 (52.5%)	3 (37.5%)	54 (51.4%)
3-4	12 (12.6%)	2 (25%)	14 (13.5%)
5 or more	2 (2.1%)	0	2 (1.9%)
Ethnicity (N=105)			
NZ Maori	12 (12.3%)	2 (25%)	14 (13.3%)
NZ European/Pakeha	71 (73.1%)	5 (62.5%)	76 (72.3%)
Maori / European	9 (9.2%)	0	9 (8.5%)
Pacific	1 (1%)	1 (12.5%)	2 (1.9%)
Maori/ Pacific	1 (1%)	0	1 (0.9%)
Other	3 (3%)	0	3 (2.8%)

Note. The non-abused cohort includes women who disclosed previous abuse as well as women never abused before.

## **Reported incidence of domestic violence**

The Abuse Assessment Screen (AAS) poses five abuse-focused questions. The first four questions screen for historic abuse, recent physical and sexual abuse and physical abuse during pregnancy. All the mentioned questions apart from the historic abuse question, invite responses to include the identity of the perpetrator and the number of times the woman was subjected to abuse in the specified time frame. Figure 5.1 graphically displays the responses to the three types of abuse. The findings in relation to the three types of abuse are presented in more detail in the following sections.

Figure 5.1 Responses to types of abuse



### Historic Abuse

Historic abuse is defined as any emotional or physical abuse experienced by the interviewee up until one year before the interview and committed by her partner or someone important to her. The reported incidence rate of historic abuse amongst the study sample is 36.5% (n=38). The data is missing for one woman. Nineteen (50%) women admitted to a history of abuse at the first interview and an equal number disclosed historic abuse at the second or third interview. Two of the participants in the latter group acknowledged their abused status at their last interview but had denied the existence of historic abuse when first screened.

The Abuse Assessment Screen allows a “yes” or “no” response. Nine (24%) respondents voluntarily offered the identity of their abusers and six (16%) women disclosed the type of abuse they had been subjected to in the past. Of the nine responses, one woman (11.1%) reported her father as the perpetrator of the abuse, whilst two (22.2%) women identified their boyfriends and six (67%) named their partners or previous partners as the abusers. Of the six responses on type of abuse, three (50%) disclosed a combination of emotional, sexual and physical abuse. The other three women (50%) reported emotional abuse.

### Recent Abuse

Recent abuse is defined as any physical acts of violence committed against the participant by any person in the past year. The data on recent abuse were available for 103 (98%) participants. The total percentage of women, who admitted

to having a history of recent abuse, is 11.7%. All women (n=12) disclosed recent abuse at the first point of screening.

Eight (66.7%) of the twelve positive responses to recent abuse pointed their intimate partners out as the batterers, while the remaining four (33.3%) disclosed “others” as the perpetrators of violence. The majority of the twelve victims (n=8; 66.6%) admitted to being subjected to abuse “more than once” and three (25%) disclosed violence directed at them as isolated incidences.

#### Recent and Historic Abuse interrelated

Over a quarter of the participants who disclosed historic abuse also admitted being subjected to violence the year before their current pregnancy. The majority of historically abused women reported no experience of abuse in the prior year.

Table 5.2 represents the relationship between historic and recent abuse.

Table 5.2. The crosstabulation between historic and recent abuse.

Recent Abuse	Yes {n=(%)}	No {n=(%)}	Total
Historic abuse Yes	10 (26.3%)	28 (74%)	38
	2 (3%)	64 (97%)	66
Total	12	92	104

### Sexual abuse

Question 4 on the AAS is formulated to elicit data on forced sexual activities the woman might have been subjected to "within the last year". No participant provided a positive response to this question.

### Pregnancy Abuse

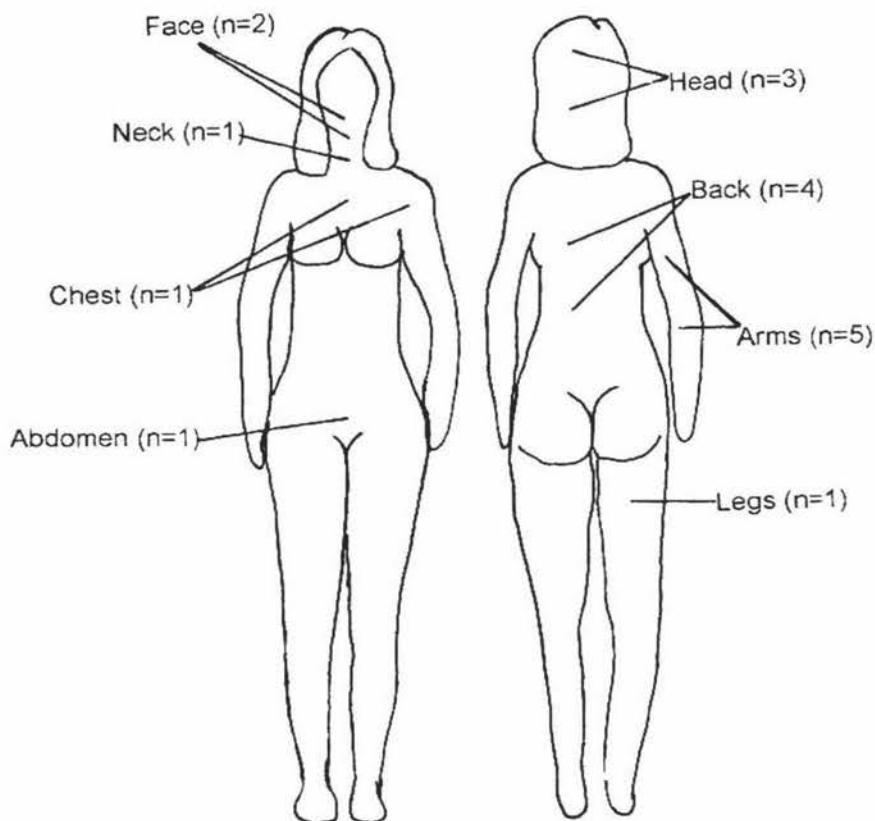
Pregnancy abuse is defined as physical abuse directed to the interviewee since she has been pregnant. The total percentage of women who disclosed physical abuse occurring during pregnancy is 7.8% (n=8). Two responses (1.9%) were not completed and were coded as missing.

Six (75%) of the women who disclosed being physically abused during pregnancy were victims of their partners. One participant (12.5%) exposed a stranger as the perpetrator of the violence. Another woman indicated that her young children displayed violent behaviour towards her<sup>1</sup>. Three women (37.5%) admitted to being abused once only and 62.5% (n=5) of the remaining women were subjected to physical abuse "more than once". One woman (12.5%) who admitted to being abused during pregnancy indicated that the physical violence occurred "too many" times. This response was coded as "more than once".

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<sup>1</sup> No explanation as to a possible reason for this unusual response can be offered. I have not encountered a similar finding in the literature.

The Abuse Assessment Screen provides the opportunity to document the exact location of visible injuries inflicted on the victim. See Figure 5.2 for a bodymap for the collective frequency of injury sites ( $n=18$ ) of seven women battered during the current pregnancy.



The data for one (12.5%) of the eight participants who disclosed abuse during pregnancy was not provided. One of the remaining seven pregnancy-abused women (14.2%) disclosed injuries inflicted to her arms and another was hit in her pregnant abdomen. A stranger inflicted the latter injury. Five women (71.4%) admitted to multiple injury sites when beaten. All of the five women, who disclosed multiple injury sites, admitted involvement of the head and face. In addition to

injuries to their heads, women indicated on the bodymap further injuries to their chests, arms, backs and necks. The abdomen was not the focus of battering in any of the multiple attacks during pregnancy. Seven of the eight (87.5%) women with positive abuse histories during pregnancy disclosed their status when screened for the first time and one participant (12.5%) revealed her abusive relationship on the second screen after denying abuse the first time. This particular woman disclosed historic, recent and pregnancy abuse.

#### Interrelationship between Pregnancy, Historic and Recent Abuse

A high percentage of women who disclosed abuse during pregnancy also reported recent and historic abuse. Refer to Tables 5.3 and 5.4 for the association between the different forms of abuse measured with the Abuse Assessment Screen. As seen in the Tables, the majority of abused women in the study also disclosed experiences of abuse in the past. All women who divulged abuse during pregnancy were also subjected to abuse the year before the pregnancy.

Table 5.3 Pregnancy Abuse crosstabulated with Historic Abuse

Historic Abuse	Yes {n=(%)} Pregnancy Abuse Yes	No {n=(%)} Pregnancy Abuse No	Total
	7 (87.5%)	1 (12.5%)	8
	30 (31.6%)	65 (68.4%)	95
Total	37	66	103

Table 5.4 Pregnancy Abuse crosstabulated with Recent Abuse

Recent Abuse	Yes {n=(%)}	No {n=(%)}	Total
Pregnancy Abuse Yes	8 (100%)	0	8
	No 4 (4.2%)	91 (95.8%)	95
Total	12	91	103

### **Women who live in fear and domestic violence in pregnancy**

Question 5 on the AAS asks the participant whether she is afraid of someone she has identified as a perpetrator of violence against her. Of the eight women who admitted to abuse during pregnancy, 50% (n=4) experienced fear and 50% did not. Ninety-seven percent (n=91) of the non-abused sample reported no experience of fear, yet 3% (n=3) reported a presence of fear in their lives, but denied that abuse was occurring.

### **Domestic violence, substance use and birthweight**

In the next section the results of substance use habits are described as found in the non-abused and the pregnancy abused cohorts. Then the effects of domestic violence and substance use on the birthweights of the participants' babies are presented. A display of the mean birthweights in each of the specified subgroups completes the chapter.

### Pregnancy Abuse and substance use habits

Smoking habits and abuse experienced during pregnancy: Three (42.8%) of the women who admitted to being abused during pregnancy, compared to 27 (29.3%) of the non-abused women, confessed to regular smoking habits. The non-smoking population represented 4 (57.1%) abused women (missing data=1) and 65 non-abused women (70.6%). Five responses are missing for the non-abused group (N=99). An overall smoking rate of 30.3% (n=30) was found in the entire sample. The breakdown of regular smoking patterns crosstabulated with pregnancy abuse is displayed in Table 5.5. The highest percentages for both the pregnancy-abused and non-abused women were found in the 10-19 cigarettes per day category.

Table 5.5 Pregnancy abuse crosstabulated with regular smoking patterns.

Regular smoking (CPD)	1-4 {n=(%)}	5-9{n=(%)}	10-19 {n=(%)}	20 or more {n=(%)}	Total
Pregnancy abuse Yes	1 (33.3%)	0	2 (66.6%)	0	3
	No	4 (15%)	9 (33.3%)	13 (48%)	1 (3.7%) 27
Total	5	9	15	1	30

Note. CPD = Cigarettes smoked per day.

Pregnancy abuse and alcohol consumption: Three (42.8%) abused women, compared to 32 (34.4%) non-abused women, admitted to regular alcohol

consumption during pregnancy. Alcohol intake was denied by four (57.1%) abused (missing data=1) and 61 non-abused women (66%). Four non-abused participants did not respond (N=100). The complete sample had an overall alcohol consumption rate of 35% (n=35).

Pregnancy abuse and use of substances/medication: Four of the eight women (50%), who admitted to abuse during pregnancy, indicated on the self-administered questionnaire that they "regularly take drugs". Three of these four women (75%) chose not to identify the drug. All three women indicated on the questionnaire that they "... take drugs/medication only as directed and prescribed by [her] doctor/midwife." One of the four (25%) verified "painkillers" as the non-prescribed drug that she regularly took.

Twenty-five women (23%) of the complete sample indicated the use of a drug or medication. One respondent chose not to answer the question at all. She denied any experience of abuse. Sixteen responses (64%) indicated the taking of regular drugs/medication as prescribed by their midwife or GP. Fifteen of these respondents did not identify the prescribed medication/substance they were taking. The woman who took regular prescribed medication was an asthmatic.

Five women (20%) admitted to the occasional use of substances/medication, not prescribed by their doctor or midwife. Three of these women (60%) indicated the use of Paracetamol and the other two women (40%) responded that they used homeopathic remedies during pregnancy. The occasional use of prescribed medication included three responses (12.5%); two using medications for asthma

and the third woman received treatment for a blood disorder.

Pregnancy abuse and birthweight: The distribution of birthweights of the babies born to pregnancy abused and non-abused women is displayed in Table 5.6. The highest percentage of babies born to pregnancy abused women is found in the 3000-3999g category as is the case with those babies born to mothers who did not report abuse during pregnancy. One very heavy baby (4800g) was born to a pregnancy abused mother at 43 weeks gestation, which complicated interpretation. One woman left her LMC's care after disclosing abuse during pregnancy. Her baby's birthweight is missing.

Table 5.6 Pregnancy abuse crosstabulated with birthweight.

Birth weight in categories	2000-2499g {n=(%)}	2500-2999g {n=(%)}	3000-3999g {n=(%)}	4000-4499g {n=(%)}	4500-4999g {n=(%)}	Total
Pregnancy abuse Yes	0	2 (29%)	4 (57%)	0	1 (14.2%)	7
	No	2 (2.2%)	6 (6.5%)	68 (74%)	14 (15.2%)	92
Total	2	8	72	14	3	99

## Correlations<sup>2</sup>

Due to the small sample size ( $N=105$ ) statistical analysis was performed with caution. Pearson's  $r$  (Pearson product-moment correlation coefficient) two-tailed test was used as a descriptive statistic to summarise the magnitude and direction of the relationship between the abuse variables, as screened for with the AAS, and substance use habits collected using the questionnaire. The t-test was performed to test whether the difference between the mean birthweights of the babies born to the abused and non-abused cohorts was by chance alone or whether they were indeed different. The results for both tests were carefully interpreted as demonstrated in Chapter Six.

### Correlation between abuse and substance use

The Pearson's  $r$  test was used to test the correlation between abuse and substance use. A participant's response to the question on historic abuse was coded "yes=1" if she disclosed experience of historic abuse and "no=2" if she did not report historic abuse. Similarly if the woman reported smoking habits the code "yes=1" was used and if she denied being a smoker, it was coded as "no=2".

A low score on the historic abuse variable was associated with a low score on the smoking habit variable. Therefore, women who disclosed experiences of historic

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<sup>2</sup> "A tendency for variation in one variable to be related to variation in another variable." (Polit & Hungler, 1999, p. 699).

abuse had a higher tendency to also report regular smoking habits ( $r=0.356$ ,  $n=38$ ,  $p< 0.01$ , 2-tailed test). As demonstrated, a medium<sup>3</sup> relationship was found between historic abuse and smoking habits. The coefficient of determination<sup>4</sup> of 12.6% also reflects a medium correlation. Therefore, experience of historic abuse helps to explain nearly 13% of the variance in women's responses to smoking habits. No relationship was found between women who reported recent and pregnancy abuse and smoking habits.

No relationship was found between alcohol use and any of the types of domestic violence as screened for on the AAS. Therefore the abused women in the study were not significantly more likely to consume alcohol than the non-abused women.

#### Correlation between abuse, substance use and birthweight

After performing the Pearson's r test, no statistically significant relationship was found between the three types of abuse and the birthweight outcomes of the participants' babies. The differences in mean birthweights between the pregnancy-abused and non-pregnancy-abused groups were tested by means of the t-test.

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<sup>3</sup> Cohen (In Pallant, 2001) suggests r-values of 0.30 to 0.49 to be suggestive of "medium" relationships (p. 120).

<sup>4</sup> The variance shared between the historic abuse and smoking variables is only 12.6% ( $0.356 \times 0.356 = 0.126$ ).

The range in birthweight for the entire sample is 2150g to 4800g. The range in birthweight for the babies born to pregnancy-abused women is 2570 – 4800g and the range for the birthweights of babies born to non-pregnancy abused women is 2150 – 4750g. The mean birthweight for the pregnancy-abused cohort is 3457g and the mean birthweight for the non-abused cohort is 3555g. A mean difference of 98g is found. A t-test was performed resulting in  $t = -0.503$ , Degrees of Freedom ( $df$ ) = 97 and  $p = 0.616$ . Due to the level of significance selected as  $p < 0.05$ , the null hypothesis is supported that there is no statistically significant relationship between the mean birthweights of the abused and non-abused cohorts. This test was seriously hampered by the very heavy baby (4800g) born to a pregnancy-abused Pacific mother at 43 weeks gestation. Within the limitation of the small sample size and the very heavy outlier in the pregnancy abused group, the interpretation of the t-test would be that babies born to women subjected to abuse during pregnancy, were not significantly lighter than those babies born to non-abused women.

The above t-test was performed on both substance-using pregnancy-abused women and pregnancy-abused non-substance-using women. When the t-test was calculated for the pregnancy-abused substance-using women compared to the non-abused cohort (difference=389g), the result remained insignificant ( $t$  ( $df=99$ )= $2.122$ ,  $p < 0.05$ ). The t-test for the difference in mean birthweight (362g) between the babies of the pregnancy abused substance-using women and non-abused substance-using women was also insignificant at  $t$  ( $df=52$ ) =  $1.6$ ,  $p < 0.05$ . The null hypothesis is therefore accepted.

The Pearson's r test was performed to test the relationship between smoking and birthweight. The abused and non-abused women who reported smoking were coded "yes=1" and if they denied smoking habits, it was coded as "no=2". Similarly, birthweight in categories were coded as the lightest babies "2000-2499g =1" through to the heaviest babies as "4500-4999g=5".

A low score on the smoking variable was associated with a low score on the birthweight variable. Therefore women, abused and non-abused, who smoked had a higher tendency to have babies in lower birthweight categories ( $r=0.287$ ,  $N=102$ ,  $p<0.01$ , 2-tailed test). A "small"<sup>5</sup> relationship is found between smoking women and the birthweight outcomes of their babies for this sample of women. The coefficient of determination<sup>6</sup> of 8.2% further suggests a low correlation. No relationship was found between birthweight and alcohol consumption.

#### Sample subgroups and mean birthweights

In order to further inform discussion in Chapter 6 of the different subgroups in the sample ( $N=105$ ), I divided the complete sample into subgroups to inspect the effect of substance use and abuse on the birthweight.

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<sup>5</sup> Cohen (In Pallant, 2001) suggests r values of 0.1 to 0.29 to be suggestive of "small" relationships (p. 120).

<sup>6</sup> The variance shared between the smoking and birthweight variables was only 8.2% ( $0.287 \times 0.287 = 0.082$ ).

The complete sample was divided into six subgroups. The subgroups were pregnancy-abuse with and without substance use, non-abused<sup>7</sup> women with and without substance use and non-pregnancy abused<sup>8</sup> women with and without substance use. The mean birthweight<sup>9</sup> was calculated for each subgroup as displayed in Table 5.7. The difference between mean birthweights in the various subgroups was used to guide the discussion of the results in Chapter 6.

Table 5.7 displays the subgroups developed to describe the complete sample in terms of mean birthweights (for each subgroup) and associated substance use habits. The differences in the mean birthweights are presented in the closest corresponding column or row.

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<sup>7</sup> Non-abused women reported no past or present abuse at all.

<sup>8</sup> Non-pregnancy abused women disclosed previous abuse, but denied abuse during pregnancy

<sup>9</sup> The mean birthweight was calculated for each subgroup by adding the precise birthweights for each individual and divide it by the total number represented in the subgroup.

Table 5.7 Mean birthweight in each identified subgroup

	Substance use	Non-substance use	Difference in mean birthweight
Pregnancy abused women	3166g	4186g	1020grams <sup>g</sup>
Difference in mean birthweight	362grams <sup>c</sup>	509grams <sup>e</sup>	
Non-abused women <sup>a</sup>	3528g	3677g	149grams <sup>h</sup>
Difference in mean birthweight	239grams <sup>d</sup>	245grams <sup>f</sup>	
Non-pregnancy abused women <sup>b</sup>	3289g	3432g	143grams <sup>i</sup>

Notes. <sup>a</sup>Women who reported never being abused before.

<sup>b</sup>Women reported historic and/or recent abuse, but not abused during pregnancy

<sup>c</sup>Difference between birthweights of pregnancy abused and non-abused substance-using women

<sup>d</sup>Difference between birthweights of non-abused and non-pregnancy abused substance-using women

<sup>e</sup>Difference between birthweights of non-substance using pregnancy-abused and non-substance using non-abused women

<sup>f</sup>Difference between birthweights of non-abused non-substance using women and non-substance using non-pregnancy-abused women

<sup>g</sup>Difference between birthweights of pregnancy abused substance-using and pregnancy abused non-substance using women

<sup>h</sup>Difference between birthweights of non-abused substance-using and non-abused non-substance using women

<sup>i</sup>Difference between birthweights of non-pregnancy abused substance-using and non-pregnancy abused non-substance-using women

## **Summary**

Chapter 5 represented the results of the non-randomised sample on reported incidence of domestic violence, substance use habits and birthweight outcomes in a cohort of Waikato women aged 18 years and older. The results are interpreted and discussed in Chapter 6. Conclusions are drawn in Chapter 7.

## **Chapter 6**

### **Discussion**

#### **Introduction**

A prospective, non-experimental research design was used in this study. Trained midwife LMCs collected the data. A research sample of 105 women was recruited with data collected on three occasions from 26.6% of the women, twice from 31.4% of the women and 41.9% of participants were screened once. The data was analysed using SPSS (Version 10) and the results obtained are described in Chapter 5.

In this chapter, the discussion firstly aims to address the research question on the reported incidence of domestic violence in pregnancy and secondly to test the results in terms of the stated hypotheses. These were:

- Domestic violence by itself during pregnancy is associated with lower birthweights.
- Domestic violence in combination with substance use during pregnancy are associated with lower birthweights.

The key findings were:

- The reported incidence of domestic violence during pregnancy was found to be 7.8% in a Waikato cohort of 105 women aged 18 years and older.

- Historic and recent abuse are strongly associated with abuse during pregnancy.
- Women who disclosed historic abuse are significantly more likely to smoke
- Women who smoke are significantly more likely to have lower birthweight babies.

At the outset of the study, I only intended to examine the reported incidence rates of abuse during pregnancy. However, I found high rates of lifetime abuse (a combination of historic and recent abuse) in my study (37.5%). A strong link exists between past abuse and current abuse (Helton et al., 1987; Parker et al., 1994; Parker et al., 1993). When this strong link is considered against the high rate of past (previous) abuse found in the current study, I deemed an in-depth look at the reported incidence rates of the three types of abuse screened for with the Abuse Assessment Screen (AAS) (historic, recent and pregnancy abuse) as warranted. Accordingly, I discuss the reported incidence of a) historic abuse, b) recent abuse c) previous abuse and d) abuse during pregnancy in the following sections.

### **Reported incidence of Historic Abuse**

For the purposes of this study, historic abuse is defined as emotional or physical abuse perpetrated against the interviewee up until the year before the current pregnancy. Question 1 on the AAS collected the data on historic abuse experiences and this analysis is found in Chapter 5, p. 99.

The reported rate of historic abuse captured in this study is 36.5% (n=38).

Because of the limitations of the study, the findings cannot be said to apply to the general population. But in theory, should this rate be extrapolated to the general population it would mean that about one in three pregnant women seeking health care has been the victim of violence at some point in her life. This finding is consistent with that of Walker (1979) who found that one third to one half of women experience assaults at some time in their life. The Confidential Enquiry into Maternal Deaths (1997-1999) in the United Kingdom states that one in three women are subjected to domestic violence (Department of Health, 2002).

The current study also revealed a high incidence of recent abuse<sup>1</sup> in cases where women also disclosed a history of abuse (26.3%). This interrelationship between historic and recent abuse is presented in Chapter 5, p. 100. A higher rate of 37.9% of women with a history of abuse who also disclosed physical violence within the last year emerged from the Australian study by Webster et al. (1994). It would therefore be reasonable to conclude that historic abuse places a woman at high risk of exposure to violence the year before her pregnancy.

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<sup>1</sup> Recent abuse is defined as physical abuse in "the last year" (prior to pregnancy). See Appendix A.

## **Reported incidence of Recent Abuse**

Recent abuse is ascertained on the AAS (Question 2) by direct inquiry about physical violence perpetrated against the interviewee “within the last year”. The analysis as discussed in this section is found on pages 99-100 of Chapter 5.

As evident in the discussion to follow, when compared to other studies the finding of 11.7% of recent abuse in the current study is towards the lower end of the reported incidence scale. It is however comparable with the rates reported by Webster et al. (1994). Abuse the year prior to the pregnancy was reported by 11.2% of the 1 014 participants in the Webster et al. study undertaken in Australia. Similar to my research method, Webster et al. administered an abuse-focused screen in a private and personal interview, but included 16 – 18 year adolescent women in their sample. Adolescents consistently report higher abuse rates than adults (Curry et al., 1998; Parker et al., 1994; Parker et al., 1993). Despite the proportion of teenagers the reported incidence rate in Webster et al.’s study is also relatively low.

In contrast to my finding, the majority of studies (Curry et al., 1998; Parker et al., 1993; Parker et al., 1994) used for comparison describe reported incidence rates of recent abuse of around 23%. All these studies included the participants’ responses to questions about forced sexual activity and physical abuse in the year before the pregnancy. The recent abuse rates therefore included sexual abuse. In the present study not a single participant responded positively to the sexual abuse question. The reason for this non-response is unknown. Sexual

offences are not uncommon in New Zealand as illustrated in the next section.

In a report based on New Zealand data collected for the 1992 International Crime Survey, 18% (n= 12 of 67 women interviewed) reported being victim to one or more sexual offences in their own home in the five year period before the interview (Harland, 1995). In another NZ study of a random sample of 1663 women undertaken by researchers at Otago Medical School, 12.5% of 16 year olds and older, reported experiencing sexual assault.<sup>2</sup> The perpetrator was not identified (Martin, O'Shea, Romans, Anderson, & Mullen, 1993).

In the previously mentioned overseas studies (Parker et al., 1993; Parker et al., 1994), an additional screen - the Index of Spouse Abuse (ISA) – was included. The ISA is designed to measure the magnitude of physical and non-physical violence. The reported incidence rate captured with the combined use of the AAS and ISA, is therefore inclusive of emotional abuse, whereas the AAS collects data on physical violence (including sexual abuse) alone. The studies by Parker et al. (1994) and Parker et al. (1993) both administered the AAS and ISA as well as collected data on three occasions to capture abuse prospectively. A fourth study used for comparative purposes also documented a 23% reported incidence rate of recent abuse. This American study by Curry et al. (1998) of 1 127 pregnant adult women prospectively administered the AAS in private, personal interviews, but did so once only at a mean gestational age of

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<sup>2</sup> In this study sexual assault was defined as: a) someone using physical force to make the victim have sex; b) someone using threats or frightening the victim into having sex; c) someone using force or threats to have some form of sexual contact with the victim (Martin et al., 1993).

16 weeks. Curry et al's study included Asian women. In this way the sample differed from that of Parker et al. (1994) and Parker et al. (1993). These studies recruited stratified cohorts of White American, African-American and Hispanic women. One can cautiously draw the conclusion that a higher rate of abuse in the year prior to pregnancy is ascribed to the inclusion of other cultures not normally represented in North American research. The lack of New Zealand research into reported incidence rates of abuse the year before pregnancy makes local comparison of my findings impossible.

As discussed above, inconsistency in both the research tools and methodologies used in the various studies cited, limits comparison. However, a number of reported incidence surveys collected data on lifetime abuse up until the pregnancy. This data can be compared to the sum of this study's historic and recent abuse rates. Previous abuse is a primary indicator of current abuse (Helton et al., 1987; Parker, et al., 1993) and current abuse puts women at risk for future abuse (Hillard, 1985). This continuum of violence warrants a deeper look into the rates of abuse prior to pregnancy.

### **Reported incidence of previous abuse**

The term "previous abuse" for the purposes of this discussion is the total of historic and recent abuse rates disclosed by participants in the current study. The percentage of women who had ever experienced domestic violence is at the upper end of the range found in studies undertaken in primary settings. The combined historic and recent abuse figures in the current study totaled 37.5%,

whereas reported incidence rates of previous abuse in the literature range from 10.9% (Hillard, 1985) to 29.7% (Webster et al., 1994).

In her American study, Hillard (1985) screened 742 pregnant women for physical violence alone and reported a 10.9% rate of previous abuse. The sample included adolescents from age 13 years and a higher percentage of lower income and rural women. All these groups are associated with a higher incidence of domestic violence (Campbell et al., 1992; Chamberlain, 2002; Parker et al., 1994). Despite inclusion of these high-risk groups, Hillard's study yielded a low percentage of previous abuse. A possible explanation could be that the phrased question "Has anyone at home hit or tried to hurt you?" (p. 186) was open to interpretation. It had the potential to lead the interviewee to believe that apart from "hitting", other forms of physical violence were excluded from questioning.

The abuse assessment question used to screen for domestic violence in the American studies undertaken by Berenson et al. (1991) and Helton et al. (1987) produced reported incidence rates of 15% and 20% respectively. Both these studies asked their respective samples whether they were in a relationship with someone who "... threatened abuse, has hit, slapped, kicked (or physically hurt them)..." (Helton et al., 1987, p. 1337).

In their UK study, Johnson, Haider, Ellis, Hay and Lindow (2003) and in Australia, Webster, et al. (1994) screened for both physical and emotional abuse and described previous abuse rates of 17% and 29.7% respectively. The

only similarity between the current study and those of Johnson et al. (2003) and Webster et al. (1994) is the use of a research tool with abuse-focused questions. The number of participants in the current study was substantially smaller than either that of Johnson et al. or Webster et al. (105 participants compared to 1014 and 475 respectively). The higher rate elicited in the current study can potentially be ascribed to two factors. Firstly, interviews in the current study took place more than once in 58% of cases. Berenson et al. (1991) concluded that the "... most effective screening program [for domestic violence] would include more than one interview..." (p. 1493). In the Berenson et al. (1991) study, 50% of the abused population did not disclose their histories of abuse at the first interview. These women would have been missed on a once-only interview basis. The second factor associated with uncovering higher reported incidence rates is the regular contact associated with good pregnancy care which facilitates the development of a trusting relationship with a health professional (Duffin, 2002; Gazmararian et al. 1996). The midwives who administered the AAS in the current study had been personally chosen by the participants as their Lead Maternity Carer. Webster et al. (1994) used a trained social worker (not known to the participants) in a face to face interview to screen for domestic violence.

Johnson et al. (2003) used self-administered questionnaires to screen for domestic violence. There is evidence that personal assessment for abuse is more than three times as effective than self-report (Bohn & Holz, 1996; McFarlane & Gondolf, 1998). Personal interviews undertaken more than once to

screen for domestic violence would therefore facilitate a higher percentage of disclosure of abuse.

### **Abuse during pregnancy**

#### Background to abuse during pregnancy

Domestic violence is a sensitive issue and several factors influence the accuracy of reported incidence rates. As the abused woman moves through the Cycle of Violence (Walker, 1979), the utilisation of health resources change. Appleton and Washington (1980) described the abused woman's consumption of health service resources in the different stages of the Cycle of Violence and these are detailed in Chapter 2. The authors concluded that the temporary resolution brought about by the reconciliation phase (the third phase of Walker's Cycle theory) minimises the battered woman's use of health services. However, this tendency to access the health system less frequently during the reconciliation phase, in theory does not effect pregnancy. Pregnancy is a time of regular, scheduled contact with the health system.

The battered woman may potentially be in a different phase of the Walker Cycle Theory at each antenatal visit. During the reconciliation phase an abused woman wants to remain in the relationship. If abuse assessment occurs in this phase, a woman is more likely to deny the existence of abuse, as she honestly believes that the batterer will change and that the abuse has ended. This would lead to an underestimate of the reported incidence rate. On the other hand,

routine screening at every antenatal visit is at some point more likely to locate women during either of the other two phases of the Cycle where detection is more likely (Parker et al., 1993).

### **Reported incidence rates of pregnancy abuse**

Data on pregnancy abuse is discussed in Chapter 5, pages 101 – 103. The current study's reported incidence rate of abuse during pregnancy in a sample of 105 women, is 7.8%. This incidence rate was measured with the AAS (Question 3) and is towards the lower end of the scale found in the literature. The vast majority of the studies used for comparison were undertaken in North America. The reported incidence of abuse during pregnancy recorded in the literature ranges from 3.4% (Johnson et al., 2003) to 17% (McFarlane et al., 1992). The 3.4% incidence rate reported in an UK study by Johnson et al (2003) is very low given that the researchers used the AAS.

The Abuse Assessment Screen (AAS) (Parker & McFarlane, 1991) has been tested and is a reliable and valid screening tool for the detection of abuse (Soeken et al., 1998). Norton et al. (1995) concluded after testing two screening methods that the AAS exposed more violence compared to standard interviews. In researching reported incidence rates of abuse during pregnancy, I found studies using both standard interviews and the AAS. Retrospective studies utilising the standard interview method reported incidence rates of 3.9% (Hillard, 1985) to 8% (Helton et al., 1987). The abuse rates uncovered in prospective studies using the AAS, range from 3.4% (Johnson et al., 2003) to 17%

(McFarlane et al., 1992).

There are two likely explanations for the low rate of abuse (3.4%) found by Johnson et al. (2003). Firstly, the tool was self-administered by the participants. The demonstrated effectiveness of personal interviews versus self-administration of screening tools for domestic violence has been described by McFarlane et al., (1992). Secondly, screening was undertaken once only - at the initial booking visit. For the majority of women this would be early in their pregnancy. Screening at this point misses those women who are subjected to abuse later in pregnancy (McFarlane & Gondolf, 1998).

The highest reported incidence rates of domestic violence during pregnancy were found in large North American studies: e.g. 14.2% (Parker et al., 1994); 15.9% (Parker et al., 1993); 16% (McFarlane et al., 1996); and 17% (McFarlane et al., 1992). Sample sizes ranged from 690 to 1200. The research designs had a number of common features. These features are known to facilitate disclosure of abuse through the creation of a 'safe environment'. Primary providers who continued to care for the women during their pregnancies administered the AAS. Several personal interviews were conducted during the pregnancy and the AAS was used on each occasion.

My research methodology incorporated the principles of face-to-face administration of the AAS by trusted primary healthcare providers, more than once during pregnancy. However, 41.9% of my sample were only questioned once. Twenty-six point six percent of the sample was interviewed three times.

The small sample size, combined with single screening of nearly half the participants is likely to have influenced the rates found in the current study.

Helton et al. (1987) found 87.5% of the women battered during their current pregnancy had also been physically abused prior to pregnancy. These American authors concluded that the "... primary predictor of battering during pregnancy in [their] study was prior abuse;..." (p. 1338). My finding is consistent with that of Helton et al. (1987). Every single woman, who disclosed abuse during pregnancy, also claimed to have been abused during the previous year (recent abuse). Furthermore, 87.5% of the women in the current study, who were subjected to abuse during pregnancy, also reported historic abuse (Chapter 5, p. 103-104). Therefore, abuse at any stage of a woman's life puts her at high risk of being abused during pregnancy.

There is a further dimension to the finding of pregnancy abuse where there has been previous abuse. McFarlane et al. (1999) studied 199 abused women and reported a greater severity<sup>3</sup> of abuse among women who disclosed abuse both during and before pregnancy, compared to those women who experienced abuse only before or only during pregnancy.

Walker (2000) concluded from her study of 400 battered women that violence always "escalates in frequency and severity ... and [the] use of weapons during battering incidents increases over time." (p. 215, 217). The clinical implication is

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<sup>3</sup> "Severity of abuse" would range from "threats of abuse ... and "slapping, pushing..." to "beating up..[and] ... head injury" to "use of weapon..." (Soeken et al., 1998, p. 197).

quite simple according to McFarlane et al. (1999) in that routine screening in the health care setting must be standard care for all women. Sammons (1981) agrees with the health professional's duty towards the abused woman when she noted that the abused individual "... can be considered a high risk maternity patient, ... by virtue of physical or psychological trauma [or] the likelihood of repeated trauma..." (p. 246).

The reported incidence of abuse during pregnancy in the current study, as described above, is 7.8%. The AAS was used to collect the reported incidence data. The AAS is a versatile instrument and compiled more information than the rate of abuse. These features of abuse, as collected on the AAS, are discussed in the next section.

### **Features of physical abuse in pregnancy**

All of the women in this study who disclosed abuse, in each case reported a single perpetrator (Chapter 5, pp. 101-103). This finding closely resembles that of Johnson et al. (2003) who found 99% of abused cases reported a single abuser. This also compares favourably with the findings of Parker et al. (1993) who reported a single perpetrator in 98.5% and Parker et al. (1994), who reported a single perpetrator in 96% of abuse cases. The intimate partner/husband or ex-partner was the perpetrator in the majority of cases. Women disclosed intimate partner violence in 87.5% of cases in the current study, a finding similar to the 82% in the study by Parker et al. (1993). Johnson et al. (2003) described an intimate partner violence rate of 63%. This lower

figure is likely due to the inclusion of teenagers in the study who reported parents (16%) as the perpetrators of violence. Strangers have been identified as abusers in 12.5% of cases in the current study compared to a rate of 20% described by Johnson et al. (2003).

Pregnancy may act as a stimulus for the onset or escalation of violence with jealousy, possessiveness, low self-esteem and rigid sex-role stereotypes suggested as possible contributing factors (Hilberman, 1980; Price & Baird, 2001; Walker, 2000; Webster et al., 1994). The overall rate of 7.8% of pregnancy abuse in the present study is lower than the reported recent abuse rate of 11.7%. However, during pregnancy the perpetrator was more likely to be reported as the intimate partner (75% versus 67% before pregnancy).

Information on the frequency of abuse during pregnancy was offered by 87.5% of the participants in the current study. Thirty-seven and a half percent of women abused during pregnancy in this study, reported physical abuse inflicted on one occasion, compared to 33.3% and 35% respectively in the studies undertaken by Parker et al. (1993) and Parker et al. (1994). More than one episode of violence was reported by 62.5% of women in the current study, compared to 65% and 66.6% described by Parker et al. (1994) and Parker et al. (1993). Pregnancy, therefore, appears not to provide a safeguard against violence. In fact, pregnant women consistently report that violence perpetrated against them are not isolated incidents, which highlights the risk of injury to which the pregnant dyad may be exposed (Haggarty, Kelly, Hawkins, Pearce, &

Kearny, 2001; McFarlane et al., 1999).

In the current study women reported the head, neck and face as the most common sites injured during battering incidents in pregnancy (See Figure 5.2, p.102, Chapter 5) The next most frequently injury-inflicted areas were the victims' arms and backs. The physically abused women in Hillard's (1985) study universally reported injury to the face and 40% reported multiple injury sites. Facial injuries were also the most frequently reported by the battered women in Berenson et al.'s (1991) study and 50% of these victims were struck in their abdomens. Only one participant in the current study reported injury to her pregnant abdomen. It is reasonable to consider at this point whether women who are subjected to physical violence during pregnancy experience constant fear for their own safety as well as that of their unborn children. Fear and domestic violence are explored in the next section.

### **Experience of fear and domestic violence during pregnancy**

As illustrated in the previous section, women subjected to battering report differing patterns and frequency of abuse. It is not necessary for violence to be inflicted on its victim daily to create a constant feeling of anticipatory fear. Hilberman (1980) described a subgroup of abused women who sustained only one life-threatening injury and although these victims were not subjected to any more violence, they had long-term effects. These women continued to behave as if they were in constant danger. Hilberman found a "... uniform psychological response... of paralyzing terror... identical for the entire sample of [60] battered

women." (p. 1341). Fifty percent (n=4) of pregnancy abused women in the current study disclosed fear in their relationships (Chapter 5, p. 104).

Johnson et al. (2003) expressed surprise at the low percentage (27%) of the participants in their study who reported feelings of fear towards significant others in their lives, considering the abuse these women were subjected to. The reason not all pregnant battered women express fear, could be explained by the fact that some abused women, especially those victims originating from violent families, may believe that violence is normal (Hilberman, 1980). Similarly Webster et al. (1994) described how abused women minimise or deny the reality of the abuse to which they are subjected.

### **Abuse during pregnancy, substance use and birthweight**

Violence during pregnancy harms a woman physically and emotionally. It also appears to have an effect on the foetus. "Battered women are ... two to four times likelier to give birth to LBW [low birthweight] infants." (Bullock & McFarlane, 1989, p. 1153). This may be due to the impact of a number of factors. Battered women tend to abuse substances in order to cope with the violence they are subjected to (Hilberman, 1980; Walker, 1979). The abusive relationship creates a climate of ongoing threat and fear. Thus the victim is constantly subjected to stress. Picone, Allen, Schramm and Olsen (1982) found that psychological stress negatively correlates with weight gain during pregnancy and the authors also reported that cigarette smoking and stress are associated with a "reduced efficiency of calorie utilisation for weight gain." (p. 1

212). Zuckerman et al. (1989) described substance use and low weight gain during pregnancy as factors associated with "depressed fetal growth" (p. 767).

The substances screened for in the self-administered questionnaire in the current study were cigarette smoking, alcohol consumption habits and any other prescribed or non-prescribed drugs. The results of substance/medication use in this study are found in Chapter 5, pp. 105 – 107. No participant disclosed the use of illicit drugs. Only one participant responded that she regularly used painkillers not prescribed by her health professional, whilst all other responses indicated the use of prescribed medication. The following section, therefore, only focuses on smoking and alcohol consumption in the current study and how it compares to the literature.

#### Alcohol consumption

The rate of 35% alcohol consumption among the present study's sample (Chapter 5, p. 106) is almost three times found by McFarlane et al. (1996) in their study of 1 203 women. Eleven point nine percent of the women in McFarlane et al.'s study admitted to alcohol consumption during pregnancy. The higher figure in the current study is comparable to that found in a New Zealand study of the mothers of an ethnically stratified and geographically representative random sample of 4 286 children born during 1990/91. (Counsell, Smale, & Geddis, 1994). Of the 4 265 mothers who answered questions relating to alcohol consumption during pregnancy, a total of 41.6% stated they consumed alcohol during pregnancy. Eighteen point seven percent

of these women stated they consumed alcohol more than once a week.

The overall alcohol consumption rate of 35% in this study also compares favourably to a number of older studies that found between one third and one half of women drank alcohol during pregnancy (Hilton, & Condon, 1989; Lumley, Corey, Newman, & Curran, 1985; Weiner, Rosett, & Edelin, 1983; Wright, Waterson, & Barrison, 1983). The essentially unchanged number of women over the last two decades who continue to drink alcohol during pregnancy is of note. The Royal College of Obstetricians and Gynaecologists (RCOG) (1999) in the UK quote alcohol consumption during pregnancy as 40% to 60%. The RCOG acknowledge in their guideline on alcohol consumption in pregnancy that there "... is no conclusive evidence of adverse effects in either growth or IQ at levels of consumption below 120g (15 units) per week" (p. 3). However, the RCOG continue to caution women to limit alcohol consumption to no more than one standard drink per day during pregnancy.

In the current study, the alcohol consumption differed with 8.4% between the abused and non-abused cohorts (42.8% versus 34.4% respectively). No statistically significant relationship was found between alcohol use and any of the types of abuse screened for on the AAS (Chapter 5, p. 109). I therefore conclude that in the current study women, who were abused during pregnancy, were not higher risk of consuming alcohol regularly.

### Cigarette smoking

In the current study, no statistically significant relationship was established between pregnancy abuse, recent abuse and smoking. However, women in the study who reported historic abuse were significantly more likely to smoke.

McFarlane et al. (1996) reported that 29.9% of their sample smoked. This compares with the 30.3% overall smoking rate in the current study. The figure reported from the New Zealand cohort study by Alison, Counsell, Geddiss and Sanders (1993) was 33%. In that cohort study the group most likely to smoke during pregnancy was teenage mothers in lower socio-economic groups with lower educational levels (over 60% of whom smoked). It must be noted again that the sample of the current study excluded teenagers. The overall smoking rate of the Alison et al. (1993) study is presented for national comparison in light of limited NZ data.

It is disappointing to note that the figure of 30.3% in the present study has not altered greatly from the rate of 34.5% reported in a 1979 Christchurch study of smoking in pregnancy (Fergusson, Horwood, & Shannon, 1979). The figure of 30.3% compares unfavourably with lower smoking rates reported in some overseas studies. A smoking rate of 16% was reported for pregnant French women (Blondel, & Zuber, 1988) and 21% and 24% respectively were found in two Australian Studies (Bell & Lumley, 1989; Counsilman & Mackay, 1985). It has been reported that those with the lowest levels of education are least likely to stop smoking during pregnancy. (Cnattingius & Thorslund, 1990; Fingerhut,

Kleinman, & Kendrick, 1990).

In conclusion, 42.8% of the pregnancy-abused cohort (n=3) in the present study admitted to smoking and the same percentage (n=3) acknowledged regular alcohol intake during pregnancy. The respective figures for the non-abused women (n=27) were 29.3% and 34.4% (n=32). The results of this study suggest that physically abused women during pregnancy are not significantly more prone to use tobacco or alcohol compared to women not subjected to abuse. This finding is contrary to that of McFarlane et al. (1996) and Bullock and McFarlane (1989). Due to the limitations of the small sample of the current study, no generalisation of the findings can be attempted.

#### Substance use and birthweight

The association between abuse and substance use is one probable pathway whereby abuse affects birthweight (Curry, Perrin, & Wall 1998; Martin et al., 1996; Webster et al., 1994). McFarlane et al. (1996) concluded that “[as] a triad, physical abuse, smoking, and alcohol/illicit drug use were significantly related to birth weight.” (p. 319).

No significant relationship was found between any of the types of abuse including pregnancy abuse and the birthweight outcomes of their babies. Also no significant, relationship was established between alcohol consumption and birthweight. A significant correlation was found between smoking and birthweight. Women (both abused and non-abused) who smoked at the time of

the study, were significantly more likely to produce smaller babies than the non-smoking participants (Chapter 5, p. 110).

Low birthweight (LBW) is described, in all the studies referenced in this section, as a birthweight of 2500g or less of a live infant at any gestation. Eisner et al, (1979) described infant mortality rates as the primary indicator of pregnancy outcome, but noted LBW to be “an indicator of considerable interest.” (p. 887). The authors continued “Low birth weight is associated with increased perinatal and infant mortality and morbidity, including adverse sequelae such as mental retardation and learning disabilities.” (p. 887). The prevention of LBW has become a health priority in both Canada and the US (Bullock & McFarlane, 1989; Murphy et al., 2001). In 1995 the Canadian rate of LBW was 5.8% (Murphy, et al., 2001) with a rate of 6.8% in the US (Bullock & McFarlane, 1989). In New Zealand, the 2000/2001 Report on Maternity (2003) reported a national LBW rate of 6.36% whilst the Waikato region produced a similar LBW rate of 6.16% (Ministry of Health, 2003)<sup>4</sup>. In the present study 2% (n=2) of the participants (N=101) gave birth to LBW babies. Neither of these women disclosed abuse during pregnancy, but both admitted to historic abuse and substance use.

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<sup>4</sup> A limitation of the Report on Maternity is that the data set used to compile the report is a reflection of hospital births only. For its accuracy, Statistics New Zealand relies on parents to register births. They recorded 56 224 live births in 2001, whereas the National Minimum Dataset (NMDS) captured 54 288 for the same year. Although the difference of 1936 births could be assumed as homebirths, the Report cautions that the numbers quoted may be incorrect. As mentioned before, the accuracy of data rested with parents registering their births.

Both the mean birthweights of the babies born to the present study's sample and that of the NZ population is 3.41kg. Whilst the mean birthweights are identical, a substantial difference exists between described LBW rates (national LBW rate of 6.16% versus 2% in this study). This may be due to the exclusion in the study sample of women under the age of 18 years. The Report on Maternity included women of all ages. Eisner et al. (1979) described "maternal age under 18 years, ... [as an] increase risk of having an infant with low birthweight." (p. 887). Women under the age of 19 made up approximately 7% of the total births recorded in the Report on Maternity for 2000 and 2001 whilst the age group 18 years and under was excluded from the current study. The exclusion of teenagers could account for the lower LBW rate in the current study.

The remainder of this discussion focuses on testing the hypotheses of the present study. To support this discussion the entire sample was divided into different subgroups each with their respective mean birthweight and associated substance use habits. A table presenting this information is found on page 113, Chapter 5. It is important to note that the study has several methodological limitations one of which was the small sample size. Each subgroup is therefore even smaller and for that reason I cautiously draw conclusions, but do not attempt to generalise the findings to the New Zealand population.

Table 5.7 (Chapter 5, p. 113) presents the mean birthweight of each identified subgroup. The subgroup with the lightest mean birthweight (3 166g) was that of substance using mothers who were abused during pregnancy. The

difference in mean birthweight between the pregnancy abused, substance-using subgroup (3 166g) and the non-abused, non-substance using subgroup (3677g) is 511g. The distinct difference between the two described subgroups could lead to acceptance of the hypothesis that "domestic violence in combination with substance abuse during pregnancy are associated with lower birthweights". However, when the t-test was performed it showed no statistically significant difference between the birthweights of the babies born to abused and non-pregnancy abused cohorts, the null hypothesis<sup>5</sup> of no statistical difference in the mean birthweights (98g) has to be supported (Chapter 5, p. 109-110). Similarly, the t-test for the difference in mean birthweight between the babies born to pregnancy abused substance-using women and the non-abused cohort was also insignificant. In view of the t-test results and the small non-random sample, the hypothesis that domestic violence in combination with substance used result in lower birthweight cannot be accepted.

The other hypothesis states that "Domestic violence by itself during pregnancy is associated with a lower birthweight." When Table 5.7 on page 113 is consulted it is interesting to note that the mean birthweight of babies born to substance-using mothers who disclosed abuse during pregnancy was 362 grams less than that of babies born to substance-using, non-abused mothers. Abuse is the difference between these two subgroups. Furthermore, the pregnancy-abused substance-using mothers produced babies with a mean birthweight of 123 grams less, than that of the babies born to substance-using

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<sup>5</sup>  $H_0$ = Domestic violence by itself is not associated with lower birthweight.

mothers who disclosed previous abuse, but not subjected to pregnancy abuse. Pregnancy abuse is the only difference between these two subgroups.

The result for the pregnancy-abused, non-substance using mothers was skewed because of a particularly heavy baby. This baby was born to a Pacific Island mother at 43 weeks gestation. As a result the mean birthweight for babies of that group was 509 grams heavier than that of the babies of non-abused, non-substance using mothers. Removal of the heavy baby reverses the result. The mean birthweight of the abused, non-substance using group ( $n=1$ ) is then 105 grams less than the comparable figure for the non-abused, non-substance using group ( $n=35$ ). Removal of the heavy baby reduces the group number to one, thus making any comparisons impossible.

When the t-test was performed on the mean birthweights of the babies born to substance-using pregnancy abused women and the substance-using non-pregnancy abused cohorts, an insignificant result was obtained (Chapter 5, p. 110). In view of the t-test result and the limitations of the small subgroups, the hypothesis that domestic violence by itself results in lower birthweight is rejected. The previously described t-test of significance for the difference in birthweights of the babies born to pregnancy abused women compared to non-abused women, included substance and non-substance using women in both the groups. This insignificant result would further support the rejection of the hypothesis that pregnancy abuse by itself does not result in lower birthweight.

Murphy et al. (2001) concluded from a meta-analysis that there's is an

association between pregnancy abuse and lower birthweight. The authors reviewed 14 studies and selected eight for a meta-analysis. They found that women who reported emotional, physical or sexual abuse during pregnancy were more likely to give birth to a low birthweight (<2500g) baby than non-abused women were.

An interesting observation is that the mean birthweight of the babies born to the non-substance using women who disclosed previous abuse, but not abuse during pregnancy, produced babies 245g lighter than the mean birthweight of the babies born to non-abused non-substance-using mothers. Furthermore, the mean birthweight of the group of substance-using mothers who disclosed previous abuse is 239g lighter than substance-using non-abused group. This suggests the possibility that previous abuse may be associated with lower birthweight.

A possible reason for the finding in this study that previous abuse is associated with lower birthweight could be attributed to emotional stress. The negative impact of stress on pregnancy and its outcome has been studied. Picone et al. (1982) defined stress as "stimuli and/or circumstances, either actual or imagined that arouse anxiety." (p. 1211). A history of previous abuse could well raise stress levels during pregnancy as a woman lives with the fear of possible further abuse. Stress and fear can lead to an increase in substance use that in turn has an adverse impact on birthweight.

## **Summary**

In the current study the reported incidence of abuse during pregnancy was 7.8%. The reported incidence rates of historic abuse and recent abuse were 36.5% and 11.7% respectively. The previous abuse rates of 37.5% in this study are in upper range when compared to other studies. This high figure emphasises the importance of regular screening for abuse during pregnancy, as prior abuse is described as a major predictor of abuse during pregnancy.

No significant relationships were found between abuse and birthweight and alcohol use and birthweight. Significant correlations were found between historic abuse and smoking and smoking and birthweight.

Finally, the results of the current study did not support the stated hypotheses.

- “Domestic violence by itself during pregnancy is associated with lower birthweight.”
- “Domestic violence in combination with substance use during pregnancy are associated with lower birthweights”

The study had several methodological limitations that preclude generalisation of the findings. The conclusions and recommendations are discussed in Chapter 7 in light of the limitations.

## **Chapter 7**

### **Limitations, Conclusions and Recommendations**

#### **Introduction**

In this final chapter the limitations of the study are discussed, followed by the conclusions and recommendations for practice, education and future research.

#### **Limitations**

The current study had several limitations, which preclude the generalisation of the findings to the general pregnant New Zealand population. The limitations are discussed below.

Maternity services in New Zealand are provided through the Lead Maternity Care (LMC) model. This offers pregnant women a health professional who becomes well known to them. From a clinical viewpoint, a number of benefits, e.g. trust and confidence flow from this established relationship. However, this unique system poses difficulties to researchers seeking to access randomised samples of pregnant women. In most other countries public hospitals provide routine antenatal care through clinics, thus offering researchers the opportunity to randomise and stratify samples. In New Zealand the only avenue to access both high and low risk pregnant women is through LMCs, therefore the technique of convenience sampling is necessary.

A number of difficulties were experienced in applying the technique of convenience sampling in the current study. Because of the limited number of LMCs ( $n=12$ ) who agreed to be involved, recruitment of women into the study was slow, leaving limited time for data collection for a study undertaken for an academic qualification. A further consequence of the convenience sampling approach to recruitment was the low number of participants in the eventual sample. Monetary incentives have assisted other researchers in the recruitment process to their studies (Amaro et al., 1990; McFarlane et al., 1996). Due to limited resources, this was not feasible for the current study. I was therefore dependent upon the voluntary participation of both LMCs and their clients. Incentives may have resulted in a larger sample. In retrospect, the target of 150 women was over-ambitious considering the effort that was required to recruit 105 women. The small size of the final sample resulted in a very low number of women identified as being abused in pregnancy. This, together with the fact that it was not a random sample, made interpretation of the results difficult and prevented generalisation of the findings.

Despite strenuous efforts on the part of the researcher, no Maori midwives volunteered to participate. It is possible that this reduced a) the number of Maori women in the study and b) the amount of information disclosed by Maori participants.

The LMCs participated in a workshop in preparation for data collection. During this training session two major issues were traversed. Firstly, instruction was provided on how to use the research tools, and secondly, guidance on how

to manage disclosure of domestic violence. Some LMCs were largely unfamiliar with both issues. It is not known just how much of the substantial amount of information provided was retained or exactly what impact the novice interviewers had on the quality of the data collected.

The eligible age for inclusion in the study was pregnant women 18 years and older. A number of studies have used 19 as the cut off age for teenagers whilst 20 years and older were considered adults. Reports on pregnancy abuse in the literature tend to be separated into “teenagers” and “others”. In the current study some of these “teenagers”<sup>1</sup> were included. This made direct comparisons of findings with other studies difficult.

Not all participants were interviewed three times. This could have resulted in a reduction in the overall reported incidence of pregnancy abuse by the sample. Most, but not all women disclosed at the first screening point (Chapter 5, pp. 99,100,103).

The participants’ point of entry into antenatal care was not captured. This limitation precluded any comment on the gestational age at which the abused sample commenced antenatal care. The gestation at birth was not established either. This complicated any attempted interpretation of birthweight in relation to abuse and substance use.

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<sup>1</sup> Women 18 years of age were included in the study. The exact number of 18-year-olds is uncertain due to the fact that the questionnaire collected the age demographic data in categories and not exact age.

Since the maternity system in New Zealand is free of charge a woman's socio-economic status is not relevant as regards their use of the service. The demographic data collected in the self-administered questionnaire did not include questions on socio-economic status. Direct comparisons with the majority of overseas studies, which were conducted among the lower socio-economic groups, were therefore impossible.

The modified AAS version was used in this study for its simplicity and ease to use for first research interviewers. This version did not include the measurement for severity of physical violence experienced in pregnancy. Therefore details of the pattern of abuse during pregnancy were not collected.

The questionnaire assessed "smoking" as using "cigarettes". It is not known if some women might have considered marijuana as "cigarettes" and reported its use as such.

Data on substance use was reliant on self-report alone with no verification by means of laboratory testing. Assay tests in conjunction with self-report are more reliable than self-report alone (Frank et al., 1988; Hingson et al., 1986; Slutsker et al., 1993; Zuckerman et al, 1989).

## **Conclusions**

Discussion and interpretation of the results of the current study are presented in Chapter 6. Conclusions are cautiously drawn from these results and are

discussed below.

The multiple limitations already reflected upon, precluded the ability to extrapolate the findings nationally. The present study merely opened the door on the issues of abuse during pregnancy and its sequelae in one New Zealand context. Domestic violence typically occurs in an environment of threat and fear where substances are often used in an attempt to cope with abuse. High levels of stress place the abused pregnant woman at risk of poor health behaviours and low weight gain.

The current study revealed a rate of 7.8% of abuse during pregnancy. This result is average compared to large North American studies which yielded pregnancy abuse rates of around 14% - 17% (Parker et al., 1994; McFarlane et al., 1996; McFarlane et al., 1992). Considering this study's small sample size (N=105) compared to the large sample sizes of the other mentioned studies (690 – 1200 women), the result of 7.8% cannot be considered insignificant. Annually there are around 56,000 live births in New Zealand (Ministry of Health, 2003). Should the 7.8% pregnancy abuse rate found in the current study be extrapolated nationally, over 4,000 of these babies would have been born to abused mothers.

In light of the limitations, including the small sample size (N=105), statistical analysis was performed with limited ability to generalise the findings. Both hypotheses were rejected on the basis of t-tests. No statistically significant difference in birthweight (362g) was found between those babies born to

pregnancy abused substance-using women and the babies born to non-abuse substance-using participants. Furthermore, the mean birthweight difference (98g) of the babies born to both the pregnancy abused and non-abused women was also insignificant. The reality of the small sample resulted in even smaller subgroups from which mean birthweights were drawn. Furthermore, one very heavy baby of 4800g born to a pregnancy abused non-substance-using Pacific woman at 43 weeks gestation, complicated interpretation. The rejection of the hypotheses are not supported by the literature where significant correlations between abuse, substance use and birthweight are well described (Bullock & McFarlane, 1989; Curry et al., 1998; Murphy et al., 2001)

No relationship was established between alcohol use and birthweight. On the contrary, mothers who smoked at the time of the study were significantly more likely to produce babies with lower birthweights than women who did not smoke. The intricate factors of stress, domestic violence and substance use all contribute to a suboptimal pregnancy outcome and should not only interest researchers, but should be of intense interest to all health care professionals. "Women who are terrorized and living in fear of trauma and potential homicide cannot be expected to change a behaviour such as smoking, which they use to cope with anxiety and stress." (McFarlane et al., 1996, p. 318).

The recommendations for clinical practice and education flowing from the conclusions of this study and the literature review are discussed in the following section, followed by recommendations for future research.

## **Recommendations for clinical practice and education**

The following recommendations arise both from the conclusions from the current study as well as from the literature reviewed for the purposes of this work.

Pregnancy does not provide protection against domestic violence and if, at this time, women move through the health system unnoticed and never assessed, the dyad is at risk of escalating violence and trauma. At the same time, pregnancy offers a unique window of opportunity for screening and referral, as this is one of few times healthy women have regular scheduled contact with the health system (Bullock, 1998; McFarlane, et al., 1996; Taft, 2002). For all these reasons there should be routine assessment for abuse in the clinical setting. Such screening is an integral step in efforts to interrupt the cycle of violence (McFarlane, et al., 1996). Screening is best undertaken in a universal fashion using abuse-focused questions in a face-to-face interview (McFarlane & Gondolf, 1998). The AAS is an easy and effective tool to use in clinical practice and should be considered by health professionals as the preferred screen. Screening interviews must be held in total privacy<sup>2</sup>. No children over the age of two should be present (McFarlane & Gondolf, 1998).

The UK 1997-1999 Confidential Enquiry into Maternal Deaths recommends that all "health professionals should make themselves aware of the importance of

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<sup>2</sup> The need for privacy creates a dilemma. Good clinical practice encourages the involvement of the partner during the woman's pregnancy. There is no simple answer to these competing goals.

domestic violence in their practice" (Department of Health, 2002, p.241). This critical first step of increasing awareness should be accompanied by education and training. Price and Baird (2003) surveyed maternity services in the UK in terms of "knowledge, education, training and support and screening [for domestic violence] in professional practice" (p.15). The authors found that education and training in domestic violence issues appeared to double the incidence of health professionals screening as a matter of routine.

Educational preparation on domestic violence as a phenomenon, the art of effective screening and appropriate referral should be included in all health professionals' undergraduate programmes. Training Schools should invest adequate time and resources to facilitate students' learning in order to produce health professionals who are competent in screening and referring victims of abuse. Experts in domestic violence should present the recommended education workshops.

Health professionals in the field should receive education on domestic violence and be supported by protocols in the workplace to ensure safe screening and referral. Mezey et al. (2003) commented at conclusion of their study that "... knowledge and raised awareness alone, in the absence of additional resources and active organisational support, may not be sufficient to translate into clinical practice." (p. 751). Organisational protocols should further be effectively integrated with community-based helping agencies to which referrals for abused victims will be made.

If the abused woman uses substances, a referral to appropriate agencies is an important part of her care. It may be beneficial to have a discussion with the abused woman on the association between abuse and substance use when substances are taken for the purpose of coping with the experience of violence. McFarlane et al. (1996) believe by "...taking the focus off substance cessation and offering the woman options for safety and abuse prevention, the [health professional] may empower [the battered woman] to reduce or stop substance use." (p. 318). Also, in order to be effective health care practitioners working in the field of cessation of substance use, the dimensions of domestic violence should be included in the delivery of such programmes.

Detailed clinical notes should be made. In particular, documentation of abuse is essential. Where possible, direct quotes from the abused woman should be used. Other information that should be recorded includes the frequency and severity of abuse, location and extent of injuries. The use of a bodymap is beneficial. Should the woman present with current injuries, permission should be sought to take clinical photographs. These can be useful as evidence in court at a later stage should it be required (Fulton, 2000). Details of referrals provided to the woman and a record of a formulated safety plan must all form part of the clinical record. Where clinical notes are women-held the midwife must take extreme care not to put the woman at risk with her documentation. It is recommended that the midwives use pre-determined codes in the woman-held notes to communicate risk factors on domestic violence with colleagues. A secure documentation system to record detail on abuse is strongly advised.

Individual midwifery practices should consider a safe system whereby information on abuse is appropriately shared with colleagues, but not put the abused woman at risk.

Education should further empower midwives to recognise that

the most important contribution midwives can make to ending the abuse is to identify and acknowledge that the abuse is happening ... some women choose to do nothing at that particular stage ... some simply want a place of safety to think and consider their options, whilst others will decide to leave the abuser (Price & Baird, 2001, p.13).

Empathic listening is an essential skill for midwives to master. This technique could encourage abused women to disclose their stories of domestic violence and assist the midwife to build a relationship of trust with abused pregnant women. "Listening to women's perceptions of abuse, as well as to the types of abuse they have experienced, will assist nurses in assessing abused women's vulnerability and danger." (Haggerty et al., 2001).

Finally, all recommendations mentioned above at an individual level should take place in an environment where the message is clear that domestic violence is wrong and should not be accepted or tolerated. Clinics and waiting rooms should have literature available together with practical information on how to contact helping agencies.

### **Recommendations for future research**

1. In view of the limitations of the present study and the lack of New Zealand prevalence rates of domestic violence during pregnancy, a replication of

the current study, with modifications, would usefully add to the NZ literature. The recruitment of a larger sample together with design modifications would result in further clarification of the effects of domestic violence and substance use during pregnancy on birth outcome.

2. Domestic violence in pregnancy has been the focus in many research studies, but the prevalence of abuse in the postpartum period has not received much research attention. The stress-charged postpartum period when a vulnerable mother is recovering from the birth of her child and the household needs to adapt to new routines, could be the perfect breeding ground for violence to erupt. McFarlane and Soeken (1999) found that babies born to abused mothers continued to gain weight at a slower rate as a possible consequence of continuing violence perpetrated against the mother.
3. Teenagers younger than 18 years were excluded from the present study due to their uniqueness and specific needs as a group. A study into prevalence rates of domestic violence in pregnant New Zealand teenagers could inform the design of maternity services to effectively support this vulnerable group of young women.
4. The present study found that a high percentage of women, both abused and non-abused used alcohol during pregnancy. Women's perceptions of and attitudes to the effects of alcohol consumption during pregnancy can inform education campaigns. The long-term effects of antenatal alcohol exposure

cannot be underestimated (Day et al., 2002).

5. It was difficult to engage midwives to participate in this study. However, a great deal of awareness raising and training by the New Zealand College of Midwives to deal with domestic violence has occurred since I recruited midwives. I recommend that research be undertaken to gauge the effectiveness of this training as well as examining whether formal preparation facilitated a change in midwives' practice and attitudes in terms of screening for domestic violence.
6. While I have proposed that routine screening should be adopted, I am also aware that sound arguments can be advanced against such a step. New South Wales and Queensland health services have been piloting screening programmes in emergency departments and antenatal clinics (Taft, 2002). The findings should be reviewed in the New Zealand context. It may be prudent to build on these findings by way of a New Zealand pilot study. The integral part of any such measure would be a survey of women screened to ascertain how they feel about being asked questions relating to domestic violence. The work of Gielen et al (2000) and Stenson, Saarinen, Heimer and Sidenall (2001) would be useful in this regard, due to the contribution they have made to the literature on both abused and non-abused women's attitudes to being screened for domestic violence.
7. One of the arguments advanced against routine screening is that intervention strategies are either inadequate or ineffective. New Zealand

has a network of community agencies – including women's refuges. It would be useful to evaluate the community agencies taking into account the relevance of the findings of some overseas studies in this regard. For example, McFarlane, Soeken and Wiist (2000) found in their randomised sample of 329 abused women that the abused women assigned to the three intervention groups<sup>3</sup>, all reported a decrease in using resources designed to help abused victims. This study only included Hispanic women and can therefore not be generalised.

## **Summary**

The current study was executed with a substantial number of limitations in the research design and method. Due to the multiple limitations and the non-randomisation of the sample in particular, generalisation of the findings to the larger NZ population was precluded. Furthermore, the small sample size ( $N=105$ ) complicated statistical analysis.

The aims of the study were to uncover the reported incidence rate of domestic

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<sup>3</sup> The three intervention groups were 1) "Brief" where the woman received a wallet-size resource card with emergency phone numbers of a number of helping agencies and information about "planning for personal safety"; 2) Counseling intervention consisted of unlimited access to counseling with a female bilingual Spanish-speaking domestic violence expert; 3) Outreach service included the same counseling opportunities as well as a "mentor mother". The mentor mothers were non-professional, Spanish speaking women who offered support, education, referral through personal and telephone contact (McFarlane et al., 2000, p. 445).

violence in a Waikato cohort of pregnant women over the age of 18 years and to test two hypotheses. The prevalence rate in the sample studied was found to be 7.8%. The two hypotheses were:

Domestic violence during pregnancy by itself is associated with lower birthweight. This hypothesis was rejected.

Domestic violence in combination with substance use during pregnancy are associated with lower birthweights. This hypothesis was rejected.

Recommendations for clinical practice and education include routine screening of all pregnant women in the clinical setting by suitably educated and skilled health professionals. In the vast majority of cases women routinely access the health system during pregnancy. This regular, scheduled contact with pregnant women provides midwives with the golden opportunity to screen women for abuse and to appropriately refer to helping agencies. Substance cessation programmes should include the dimension of domestic violence due to abused individuals tendency to use substances to cope with their circumstances.

In conclusion, this study reports a reported incidence rate of 7.8% of abuse in a pregnant cohort of Waikato women over the age of 18 years and domestic violence was found not to be associated with a lower birthweight. The mentioned findings would make a replication of this study with modification to the method, worthwhile.

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# **Appendices**

# **Research Instruments**

**Appendix A: Abuse Assessment Screen**

**Appendix B: Questionnaire**

## **ABUSE ASSESSMENT SCREEN**

1. Have you ever been emotionally or physically abused by your partner or someone important to you?

YES  NO

2. Within the last year, have you been hit, slapped, kicked or otherwise physically hurt by someone?

YES  NO

If YES, by whom \_\_\_\_\_

Number of times \_\_\_\_\_

3. Since you've been pregnant, have you been hit, slapped, kicked, or otherwise physically hurt by someone?

YES  NO

If YES, by whom \_\_\_\_\_

Number of times \_\_\_\_\_

Mark the area of injury on body map.

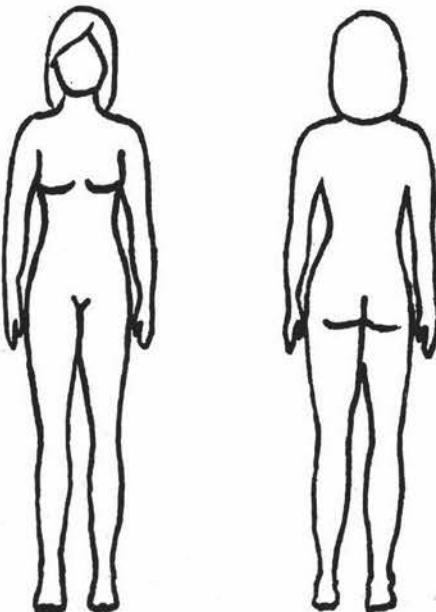
4. Within the last year, has anyone forced you to have sexual activities?

If YES, who \_\_\_\_\_

Number of times \_\_\_\_\_

5. Are you afraid of your partner or anyone you listed above?

YES  NO



\*Developed by the Nursing Research Consortium on Violence and Abuse of which both authors are members. 1989. Readers are encouraged to reproduce and use this assessment tool.

## **Appendix B**

The information in this questionnaire is confidential and will only be seen by the researcher, her supervisor and the person interpreting the statistics. Participation in this research is voluntarily and you are free to withdraw at any stage. You also have the right to choose not to answer a particular question in this questionnaire. Please do not put your name on the questionnaire. **The completion and return of this questionnaire will imply you have given your consent to participate in this study.**

**FOR EACH QUESTION, PLEASE TICK ✓ ONE BOX  ONLY UNLESS OTHERWISE SPECIFIED.**

1. I am married

single

divorced / separated

living with my partner  
(male or female)

2. My age in years is 18-24

25-29

30-34

35 and older

3. How many children do you have?

none

1-2

3-4

5 or more

4. Tick as many boxes as you need to show which ethnic group(s) you belong to

NZ Maori

NZ European/Pakeha

Asian

Pacific people

Other, please specify .....

**The following questions will cover social habits. Remember, the information is strictly CONFIDENTIAL .**

**PLEASE TICK ONE BOX ONLY.**

5. Cigarette use

I do not smoke at all

I smoke occasionally (once/twice per week)

I smoke regularly

If you smoke **REGULARLY** , please tick one of the following boxes also.

The number of cigarettes I smoke per day

1 – 4

5 – 9

10 – 19

20 or more

6. Alcohol use

I do not take any alcohol

I take alcohol occasionally

I take alcohol regularly

If you take alcohol **REGULARLY**, please tick one of the following boxes also.

I normally take the following number of alcohol drinks per week

1 – 4 drinks

5 – 9 drinks

10 – 14 drinks

15 or more

7. Drug/medication use. Please tick as many boxes as necessary.

I take drugs/medication only as directed and prescribed by my doctor/midwife

I occasionally take drugs/medication

Please specify the type of drug/medication .....

I regularly take drugs/medication

Please specify the type of drug/medication .....

If you take drugs **NOT PRESCRIBED** by a doctor/midwife, please specify who supplies these drugs to you.

- |                    |                          |
|--------------------|--------------------------|
| Myself             | <input type="checkbox"/> |
| My husband/partner | <input type="checkbox"/> |
| A family member    | <input type="checkbox"/> |
| Someone else       | <input type="checkbox"/> |

*Thank you for your participation. Please seal this questionnaire in the provided envelope now and return it to your midwife.*

**This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 01/23.**

# **Research Tools**

**Appendix C: Information Sheet**

**Appendix D, E: Consent Forms**

**Appendix F: Research Form**

**Appendix G: Research Newsletters**

## **Appendix C**

### **Information sheet**

**This project has been approved by the Massey University Human Ethics Committee, PN Protocol 01/23**

*Hi,*

*My name is Corli and I am a post graduate student at Massey University, undertaking this study for my Masters Degree in Midwifery. The aim of my project is to find out how many women in the Waikato area are abused during pregnancy. Women in abusive relationships tend to smoke more, take more alcohol and also use more drugs than women who are not abused. Midwives have regular contact with pregnant women, like you and would be the ideal person to introduce the abused woman to agencies, which could help her to keep safe. This is not presently the case, however, as many midwives are unaware of how widespread the problem of abuse is.*

#### **What is the project about?**

*This project is only the first step in highlighting the problem of abuse, the associated habits of smoking, alcohol and drug use and the effect it has on the baby. You may or may not be abused, but the information you provide will be valuable in assisting us to determine how widespread abuse is during pregnancy.*

#### **What would be expected of participants?**

*If you agree to participate in the study, your confidentiality and anonymity is fully guaranteed. The information needed for the study will be collected in three ways. Your midwife will firstly, ask you five questions about your experience of abuse, or lack of it. She will then give you a questionnaire to fill in. The researcher, her supervisor and the person assisting with the analysis of the information, will be the only ones to see your answers on the questionnaire. The questionnaire will ask some general questions about yourself and then about your smoking, alcohol or drug habits, if any. This procedure will be repeated three times during your pregnancy and should not take much longer than your routine visit. The birth weight of your baby will be obtained from your midwife with your permission. In order to participate you are required to be interviewed as well as to complete the questionnaire.*

#### **Will participants be identifiable?**

*The only way I will know you is by the number your midwife will give you for the purposes of the project. Your midwife will not see the answers you give in the questionnaire, as I will provide an envelope so that you can seal your filled out questionnaire when you are finished. I will personally open the sealed envelope.*

Your rights as a participant.

- You are under no pressure to participate in the project. If you agree to take part, your midwife will ask you to sign a consent form. This is not a contract, it is only to show that you are taking part freely and that I undertake to ensure your anonymity and keep your participation in the study confidential.
- If at any stage you no longer wish to continue, you are free to stop.
- If you decide to discontinue your participation in this study you will still receive the standard antenatal care.

*If you are an abused woman, you might be at risk when your partner or husband finds out that you have told your midwife about the abuse. This project is not only about gathering information, but it is also a start to reach out to abused women. It is also an opportunity to refer them to places of safety where they can find help and support. I have provided information about such organisations to your midwife and she will give it to you. If you are not in an abusive relationship, your contribution to the study is just as important and your participation is much appreciated.*

*The results of the project will be available from your midwife at the end of the study. If you have any questions about the project, you are welcome to discuss it with your midwife or contact me at (07) 839 8800 or my supervisor, Professor Cheryl Benn at Massey University, School of Health Sciences, (06) 350 5799 x 2543.*

*Thank you for your time.  
CORNELIA ADRIANA ROODT (Corli)*

## **Appendix D**

### **CONSENT FORM FOR CLIENTS**

**Project title: Prevalence of domestic violence in pregnancy: Interrelationships with substance use and birth weight.**

1. I have read and I understand the information sheet for volunteers taking part in the study designed to investigate the prevalence of abuse in pregnancy. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.
2. I understand that taking part in this study is my choice and that I may withdraw from this study at any time and that this will in no way affect my continuing pregnancy care.
3. I understand that my participation in this study is confidential and that no material, which could identify me, will be used in any reports in this study.
4. I have had time to consider whether to take part.

I ..... (Full name) hereby consent to take part in this study.

Date: .....

Signature: .....      Signature (witness): .....

Name of witness: .....

Researcher: Cornelia A. Roodt

Contact phone number: 07- 839 8800

Project explained by Lead Maternity Carer (name): .....

Signature: .....

Date: .....

**This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 01/23.**

## **Appendix E**

### **CONSENT FORM FOR MIDWIVES**

**Project title: Prevalence of domestic violence in pregnancy: Interrelationships with substance use and birth weight.**

1. I have read and I understand the information sheet for volunteers taking part in the study designed to investigate the prevalence of abuse in pregnancy. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.
2. I understand that taking part in this study is my choice and that I may withdraw from this study at any time.
3. I understand that my participation in this study is confidential and that no material which could identify me will be used in any reports in this study.
4. I have had time to consider whether to take part.

I ..... (Full name) hereby consent to take part in this study.

Date: .....

Signature: .....      Signature (witness): .....

Name of witness: .....

Researcher: Cornelia A. Roodt

Contact phone number: 07- 839 8800

Project explained by researcher (name): .....

Signature: .....

Date: .....

**This project has been reviewed and approved by the Massey University Ethics Committee, PN  
Protocol 01/23**

## Appendix F

# Corli's Research Newsletter

Thank you for taking the time to attend the research workshops. I am sure you all agree that Wendy knows her subject very well. Thank you, Wendy for your willingness to be available at short notice.

Up to date we have had three workshops of two hours each; 17 midwives have attended and we have 68 women already on the study. Great work. If we manage to recruit the 150 women to give us a 80% power, people will take notice of the study. Please keep up the good work.

**Please remember not to change the wording of the Abuse Assessment Screen.**

**Please try to get those women with the "hovering" partners alone to invite her onto the study. Remember, you might be the person to make a difference in her life.**

#### Consent forms

If you find a consent form included with this newsletter, please sign and give it back to me the next time I collect the data from you.

Please remember to keep the signed consent forms from the women safe. You can hand that to me at any stage.

If you have collected data with you, please let me know and I can come and collect it from you. If you need more research tools, remember it's my responsibility to provide you with what is needed. Please let me know what research material you require.

7 November 2001

Wendy suggested the following websites:

<http://fvpf.org>

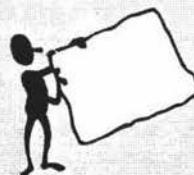
<http://nnvawi.org>

There are incredible real life stories captured and told on the first website. Definitely worth visiting if you have a spare moment or three.

Have you made the effort yet to visit the Women's Refuge? Remember the "c" of the A, B, C, D when screening a women for domestic violence? (You can revisit it on page 3 of Wendy's handout) I can give you another copy if you can't find yours.

#### **Incentive, Incentive, Incentive...**

If you invite 15 or more women onto the study, I undertake to analyse your data and present it to you in a personalised format.



**As a big thank you for your hard work, I invite you to join me for an afternoon tea:**

**DATE: 23 November 2001**

**TIME: 2pm**

We have 100 women on the study at the first data collection point. There are however, far fewer women at the subsequent data collection points. Please try your best to complete all three points.

Please remember that the abused women mostly do not come alone. It is crucial to develop skills to screen her alone. Please do it for her...

**Thank you all for the time and energy you invested in this study.**

**I am sure that your women will reap the benefits as you grow in self-confidence to ask the dreaded question about abuse.**

**Without you this study would not have been possible. Thank you**

Corri's  
Research  
Newsletter

**ATTENTION:**  
We have reached the end of data collection. Please wrap up your efforts by the end of June 2002

**Please remember to clearly identify on the envelopes your research number, that of the participant and also what data collection point the tools refers to.**

Life has been in the fast lane for me the last six months, preventing me to commence the data analysis. I hope to have started by the time this newsletter reaches you....

A warm thank you for all your support and I trust that the skills you have mastered participating in the study will serve your clients in the years to come. May you experience the satisfaction when you have empowered a woman to break free from the cycle of violence... for her baby's sake...

The study might end 30 June 2002, but please do not stop asking the abuse-focused questions

# **Ethics Committees**

**Appendix H: MUHEC**

**Appendix I, J: Waikato Ethics Committee**

Massey University Human Ethics Committee: Palmerston North (MUHEC, PN)

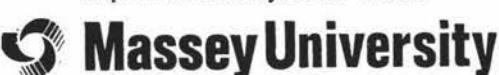
Room 2.02, Main Building, Turitea

<http://www.massey.ac.nz/~muhec>

Telephone: 64 6 350 5249

Fax: 64 6 350 5622

Email: S.V.Rumball@massey.ac.nz



Private Bag 11 222,  
Palmerston North,  
New Zealand  
Telephone: 64 6 356 9099

3 May 2001

[REDACTED]

Dear Corli

**Re: MUHEC: PN Protocol - 01/23**

**Prevalence of domestic violence in pregnancy: Interrelationships with substance use and birth weight**

Thank you for your letter dated 17 April 2001 and the amended protocol.

The amendments you have made and explanations you have given now meet the requirements of the Massey University Human Ethics Committee and the ethics of your protocol are approved.

Any departure from the approved protocol will require the researcher to return this project to the Massey University Human Ethics Committee for further consideration and approval.

A reminder to include the following statement on all public documents "This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 01/23"

Yours sincerely

A handwritten signature in cursive script that reads "Sylvia Rumball".

Professor Sylvia V Rumball, Chair

**Massey University Human Ethics Committee: Palmerston North**

cc Associate Professor Cheryl A Benn  
Health Sciences  
TURITEA

## Appendix I

# Waikato Ethics Committee

P.O Box 322  
Hamilton  
Phone (07) 846 1539  
Fax (07) 846 1496  
Email wai.ethics@clearnet.nz

27 June 2001

[REDACTED]

Dear Corli

**Prevalence of domestic violence in pregnancy: interrelationships with substance use and birth weight  
(Our ref 31/01/760)**

Thank you for attending the Committee meeting on 20 June 2001 to discuss your proposal and for your subsequent confirmation of various points. You have addressed the concerns of the Committee and ethical approval is now given to your proposal.

Ethical approval is conditional upon the Committee receiving annual progress reports on the study, a final report at the completion of the study, and a copy of any publication. Please notify us if the study is abandoned or you wish to change the protocol in any way.

Best wishes for the success of your study.

Yours sincerely

*P.D. Allan*

 Peter D Allan  
Chairperson

## Appendix J

# Waikato Ethics Committee

P.O Box 322  
Hamilton  
Phone (07) 846 1539  
Fax (07) 846 1496  
Email wai.ethics@clearnet.nz

30 August 2001

[REDACTED]

Dear Corli

**Prevalence of domestic violence in pregnancy: interrelationships with substance use and birth weight  
(Our ref 31/01/760)**

Thank you for your response of 29 August 2001. Approval is given for you to extend your study to include the Health Waikato Caseload team of midwifery practitioners.

Best wishes for the success of your study.

Yours sincerely

*D. D. Allan*

*PD* Peter D Allan  
Chairperson

## Appendix K

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[REDACTED]  
Hamilton,  
New Zealand

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