UNDERSTANDING LOW-INCOME MOTHERS' EFFORTS TO SAFEGUARD YOUNG CHILDREN IN THE HOME: AN EXPLORATORY STUDY

by

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Abstract

Unintentional injuries in the home environment pose a significant threat to the health of young children. Children living in lower-income environments are also known to be at greater risk for injuries. Little is known, however, about how mothers' protect their children from injuries and how the contexts in which they live shape these efforts.

In this study, qualitative methods were employed to explore mothers' efforts to keep their children safe in the home. Data collection took place in the homes of participants using interviews and observations. Seventeen mothers and their children (1-5 years old) who lived in a medium-sized community participated in the study. Three different approaches were used to analyze the data including ethnography, discourse analysis and gender based analysis.

The study findings revealed that mothers' efforts to safeguard children were extensive, time consuming and involved actions directed at children as well as at the social and physical environments. Mothers often took their child safety efforts for granted and a variety of contextual factors were found to shape these efforts. Furthermore, women's accounts of their children's injuries also revealed how they aligned themselves with dominant cultural expectations about mothering and child safety but also how they challenged these expectations. On the whole, mothers expressed a strong commitment to keeping their children safe and described ways that their safety efforts were both supported and constrained. These constraints included a lack of financial resources, limited options for assistance with childcare, a restriction of social ties, presence of outdoor hazards, and challenges related to modifying the physical household environment. The analysis also showed how women's safety activities were closely linked to their gendered practices as mothers.

These study findings suggest that future research needs to address how children's injuries can be prevented through better supports for mothers' home safety efforts and increased understandings of mothers' perspectives about child safety. When planning injury prevention

interventions, practitioners need to consider how the meanings that mothers hold about child safety, and the constraints and realities they face living in challenging social conditions may affect their uptake and use of safety messages.

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I would also like to express my gratitude to the women who participated in this study. The willingness with which they shared their experiences and stories about themselves and their families contributed valuable information for studying children's safety and also made this an enjoyable experience. I would also like to thank all of those people who helped with many different aspects of this research including Pamela Joshi, Clarissa Tufts, Hansdeep Bawa and Mariana Brussoni. I am also very grateful to my family – Scott, Charlotte, Hannah and my mother, Jytte, for all of the understanding and help you continuously provided.

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Dedication

This work is dedicated to my daughters, Charlotte and Hannah, and to my husband, Scott Romses, who were unwavering in their patience and support as I undertook this work.

Co-Authorship Statement

Lise Olsen envisioned the overall study and developed the design and methodology in collaboration with her supervisory committee members. Lise Olsen recruited participants for the study, managed informed consent procedures, conducted interviews with participants and collected observational data during home visits. Lise Olsen also conducted the data analysis and drafted the thesis chapters.

Members of the supervisory committee included Dr. Joan Bottorff, Dr. Parminder Raina and Dr. James C. Frankish. The committee members contributed to the study design, provided guidance for the analysis and assisted with the interpretation of the findings. Committee members also provided feedback and critique of the manuscript drafts. Lise Olsen will serve as the lead author on the manuscripts that are submitted to journals for publication. Supervisory committee members will be included as co-authors of the manuscripts and will be asked for their approval of final versions prior to submission for publication.

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Chapter 1
Introduction and Literature Review

Overview of Thesis Format

This thesis follows a manuscript style using the guidelines outlined by the Faculty of Graduate Studies at the University of British Columbia. Chapter One provides an introduction to the problem of unintentional injuries among children as well as a summary of the literature in this area. This summary of research includes a review of research studies that have evaluated injury prevention interventions aimed at reducing home injuries among children. The literature review also uses a systematic review strategy to summarize the literature on parental home safety behaviours and the factors that have been found to influence these behaviours. This summary includes an overview of methods, key findings and a critical analysis of the research in this area.

Chapters Two through Four are comprised of three manuscripts that will be submitted for publication in journals relevant to the fields of injury prevention and children's and women's health. These three manuscripts each summarize the methods and results of these three analyses that were based on different theoretical approaches to understanding the issue of mother's efforts to keep children safe in the home environment. These three manuscripts are longer than standard journal articles because they aim to provide additional details that are necessary to thoroughly describe the research methods and findings for this dissertation. In consultation with the co-authors, these Chapters will be condensed to an appropriate length prior to submission to journals.

Chapter Five of this thesis provides an integrated discussion of the findings across the three analyses that were conducted, strengths and weakness of the study overall, as well as providing suggestions for potential application of the findings, new ideas for research and suggestions for future direction for research in this area as well as for the field of injury prevention as a whole.

Unintentional Injuries Among Children

In Canada, unintentional injuries represent a significant public health problem, affecting all age groups and all regions of the country. The economic burden of unintentional injury in Canada is also high with total annual costs estimated at 8.7 billion dollars (SmartRisk, 1998). For children in particular, injuries represent a major burden of disease. In the year 2000, injuries were the leading cause of death for 1-4 year old boys and girls in Canada and accounted for 30% of deaths in that age group (Public Health Agency of Canada, 2000).

The home environment is a location where young children are at greater risk for injuries, particularly because homes are generally designed for adults (Safe Kids Canada, 2006a) and also because young children spend large proportions of their time in the home environment. For children under five years, those who are between one and two years are also at greater risk for injuries because their motor development is faster than their cognitive abilities to understand dangers (Safe Kids Canada, 2006a). It is estimated that between 50% to 70% of deaths caused by unintentional injuries to children less than five years occur in and around the home (Glik, Greaves, Kronenfeld, & Jackson, 1993; Pollock, McGee, & Rodriguez, 1996) with fatalities due most frequently to fire/burns (51%), drowning (22%) and suffocation (10%) (Pollock et al., 1996).

An analysis of injury data from the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) for the years 1997-2003 showed that of injuries to children less than five years that resulted in an emergency department visit, 66% of the injuries occurred in the home environment. Of these, 88% occurred in children's own homes and 12% occurred in the private homes of others (Safe Kids Canada, 2006a). For these home injuries to children ages birth to four years reported in the CHIRPP database, the four leading causes of injury included: falls,

burns, poisonings and dog bites. The types of injuries identified included: 26% lacerations, 20% fractures, sprains or dislocations, 14% bruising and 14% minor closed head injuries.

There are a number of studies suggesting that lower socio-economic status (SES) is linked to higher levels of injury risk among children (Safe Kids Canada, 2006b). In a review of research on social inequality in injury risks, Laflamme (1998) concluded that children living in more deprived social circumstances suffer greater numbers of injuries than average and that these injuries are also more likely to be fatal. Socioeconomic factors may play a greater role at preschool than at school age and the social gradient for injury mortality has been found to be particularly pronounced for traffic-related injuries, fires, homicides and suicides. The mechanisms by which social inequities influence injury rates are not well understood, but the differential risk gradients are thought to reflect differing risk exposures to children living in different social and economic situations. There have been more consistent findings reported for SES differences in injury mortality than for morbidity (Lyons, Jones, Deacon, & Heaven, 2003; Soubhi, Raina & Kohen, 2001). For example, Nersesian, Petit, Shaper, Lemieux & Naor (1985) examined U.S. mortality data from Maine (1976-1980) and found that for those on social welfare, children's death rates due to accidents to be 2.6 times greater than those not on welfare and with drowning deaths 4.1 times more likely for the children from low-income families. For non-fatal injuries, the relationships are less clear. Some studies have reported higher levels of injuries resulting in emergency room visits among young children living in low SES settings (Alwalsh & McCarthy, 1988; Faelker, Pickett & Brison, 2000; Ramsay, Moreton, Gorman, Blake, Goh, Elton et al., 2003) while other studies have found SES status to be unrelated or inversely related to non-fatal injuries among children (Engstrom, Diderichsen & Laflamme, 2002; Scheidt, Harel, Trumble, Jones, Overpeck & Bijur, 1995). The authors of these studies suggest this may be related to differences in care-seeking behaviour, access to care and possible reporting bias by parents as well as greater access to recreational opportunities and thus to sport-related injuries

among higher income children. A cross-sectional and longitudinal analysis of data from the Canadian National Longitudinal Survey of Children and Youth (NLSCY) reported that family SES status was positively related to the occurrence of parent reported childhood injury among those 2-11 years (Soubhi et al., 2001). In this same analysis, the neighbourhood measures most associated with risk of injury were neighbourhood disadvantage (particularly among 2-3 year olds) and the prevalence of neighbourhood problems. Despite mixed findings regarding injury morbidity, it appears that children living in impoverished home environments and neighbourhoods are at a greater risk for fatal injuries and may possibly be at greater risk for less severe injuries as well. This literature suggests that social and physical environments may be important influences on childhood injury and indicates a need for understanding of the kinds of intervention efforts that can help reduce the occurrence of injuries and improve safety conditions for children living in low income conditions. The following provides an overview of results of current intervention literature that has focused on a variety of strategies to reduce child injuries in the home environment.

Injury Prevention Intervention Research

The evidence to date has not been convincing that current safety intervention strategies have succeeded in reducing injuries, improving parental safety behaviours substantially or addressing safety challenges existing in low socioeconomic situations. Seven systematic reviews of research on general childhood home injury prevention interventions were identified which arrived at similar conclusions regarding lack of intervention effectiveness (Appendix 1). Most of these were well-conducted reviews, rating between 7 and 9 out of 11 points using criteria for assessing review studies developed by Oxman (1994) (Appendix 2). Only one of the reviews used meta-analytic methods (Roberts, Kramer & Suissa, 1996), while the remaining provided narrative summaries of results. Authors described the difficulty of combining data from the

different studies due to the diversity of intervention types and outcomes measured (Lyons, Sander, Weightman, Patterson, Jones, Lannon et al., 2005; Spinks, Turner, McClure & Nixon, 2004). Overall, these reviews did not find strong evidence for the effectiveness of general safety interventions aimed at childhood injury reduction in the home environment and only modest evidence for changes in safety behaviours or reductions in hazards in the home.

Two of the reviews examined studies on the effectiveness of randomized interventions delivered in clinical settings. One of these reviews focused specifically on parents of children under five years (Close, 2002) while in the second review, only five of the 22 studies were focused on children five years or less and assessed general childproofing interventions (DiGuiseppi & Roberts, 2000). In both of these reviews, there were no reported decreases in injury rates found across the various studies. In only one of the individual studies (Clamp & Kendrick, 1998) were there positive and statistically significant differences reported for most of the parental safety behaviour outcomes. The behavioural changes found in this study may have been related to the intervention design that consisted of a clinically-based safety counselling session for parents as well as provision of low-cost, subsidized safety items that were made available to low-income families. However, because the outcome assessment follow-up time was only 6 weeks, it is not known to what extent these behavioural changes were sustained.

In their review of both randomized and non-randomized intervention studies conducted in both clinical and home-based settings, Lyons et al. (2005) assessed the effectiveness of interventions to reduce physical hazards in the home. Among the 11 childhood studies reviewed, seven studies showed some reductions in home hazard levels, however, there were no reductions in injury rates reported.

In another review of studies that examined the effectiveness of home visiting programs, Roberts et al. (1996) found that in six of the eight RCT's reviewed, there were lowered incidences of injury reported among children whose families received home visiting. The

authors reported a pooled odds ratio of 0.74 (95% CI: 0.62-1.53) for those receiving the home visiting interventions versus controls.

There were also two systematic reviews that examined non-RCT community-based intervention studies. In the first of these, Klassen, MacKay, Moher, Walker & Jones (2000) reported evidence of injury reduction in one of the four studies reviewed. This was a community-based intervention study aimed at 5-16 year olds in Harlem, New York, which reported a 50% decrease in injuries among the intervention group. The authors of the review concluded that community-based studies deemed the most likely to succeed are those that use multiple strategies and are grounded in behaviour change theory (Klassen et al., 2000). In the second review of community-based childhood injury prevention studies, Spinks et al. (2004) reported that injury reductions were found in three of the seven studies that had utilized community groups as controls. However, the authors concluded that the evidence about the effectiveness of community based programs on injury reductions among children was inconclusive.

Finally, a systematic review of studies evaluating general home safety interventions aimed at families with children 0-14 years was conducted by Dowswell, Towner, Simpson & Jarvis (1996) and updated by Towner, Dowswell and Jarvis (2001). These reviews showed some increases in knowledge and safety behaviours but little evidence of injury reductions. In a separate publication, Dowswell and Towner (2002) assessed the literature that specifically addressed studies conducted with disadvantaged families. This review included eight general home safety intervention studies and reported finding reasonable to good evidence of behaviour changes, but no evidence of injury reductions among children living in disadvantaged settings.

The findings from these review studies suggest that educationally-based intervention studies aimed at general home injury prevention among children have shown some evidence of changing parental safety behaviours but no evidence of reducing child injuries. There is also

little systematic review-based evidence available regarding types of interventions that may be effective with families whose children are at higher risk from living in disadvantaged situations.

In addition to these review studies, there were six general home safety intervention studies also identified in the literature which had not been included in any of the review studies previously discussed (Bass, Mehta & Ostrovsky, 1991; King, LeBlanc, Barrowman, Klassen, Bernard-Bonnin, Robitaille et al., 2005; Nansel, Weaver, Donlin, Jacobsen, Kreuter, & Simons-Morton, 2002; Posner, Hawkins, Garcia-Espana & Durbin, 2004; Sznajder, Leduc, Janvrin, Bonnin, Aegerter, Baudeier & Chevallier, 2003; Watson, Kendrick, Coupland, Woods, Futers & Robinson, 2005) (Appendix 3). While these studies provided some evidence supporting the use of interventions to affect parental safety behaviours, only one study focused on low-income families. In this home-based intervention study by Watson et al., (2005), safety equipment and counselling were provided to parents with children less than five years living in deprived areas. While safety practices were found to be higher among the intervention families at one and two years follow-up, there were no significant differences between intervention and control groups in the rates of child injuries that received medical attention.

The lack of overall success of general child home safety intervention efforts may relate to issues of intervention planning, implementation and as well as evaluation methods. Therefore, while this body of intervention literature does provide some evidence that various kinds of intervention approaches can affect parental safety behaviour uptake, there is little direct evidence that injuries among children are reduced as a result and if they are reduced, how those reductions came about. In addition to the great variety of program strategies and settings, the intervention research studies also vary greatly in the behavioural and injury outcomes assessed, making direct comparisons across studies difficult. Furthermore, there was little evidence that any of the intervention studies reviewed made use of an intervention planning framework or model to guide the program design. Finally, there have been few studies that have targeted lower income

families specifically, making conclusions about the kinds of interventions that may be most effective in these populations is an important area for further research.

The community-based studies have shown some modest positive results as described in the reviews by Klassen et al. (2000), Spinks et al. (2004) and in the study by Bass et al. (1991). These positive changes in injury reduction support the idea that interventions that address factors at multiple levels (e.g., social, community, policy) in addition to the individual level increase the potential for intervention success. There is also evidence from other community-based trials in other health areas that multi-level interventions are the most effective (Emmons, 2000; Green & Kreuter,1991) and have also been shown to be effective, for example, in motor vehicle injury reduction efforts (Emmons, 2000). Assessing outcomes of community level interventions are not without problems, however, since with the use of non-randomized design methods there may be difficulty assessing whether health gains in the control group are due to diffusion of the intervention to control communities or gains in the intervention group are due to secular trends. Speller, Learmouth & Harrison (1997) recommend using process and qualitative measures to better understand such health promotion implementation issues in community studies. Implications of findings from community-based intervention studies for child injury reduction for future research is that a better understanding is required of how factors operating at various levels can influence or support parent safety behaviours, particularly for those who are parenting in lower SES homes and environments. Intervention effectiveness could be improved by developing strategies that address factors influencing parental safety behaviours which constitute a critical component of childhood injury prevention. This is because young children are highly dependent on adult behaviours for providing supervision, care and ensuring safe home environments, and thus interventions are needed that optimize or support parental safety behaviours (Finney, Christophersen, Friman, Kalnins, Maddux, Peterson, Roberts, & Wolraich, 1993; Wortel & de Geus, 1993). Gielen, Wilson, Faden, Wissow, & Harvilchuck (1995) suggest

that protecting young children in the home requires parental efforts to minimize hazards, as well as supervision and developmentally appropriate teaching. In order to develop better understandings of how parental safety behaviours can be supported and enhanced by interventions, it is first necessary to ascertain the range and types of safety behaviours that parents use as well the kinds of the factors that influence those behaviours. A systematic review of this topic was, therefore, undertaken to comprehensively assess this body of literature.

Systematic Review of Parental Safety Behaviours and Influencing Factors: Methods

In order to examine existing research on the safety behaviours utilized by parents of young children and the factors that influence those behaviours, a review of the literature was undertaken to systematically assess this body of knowledge. Systematic review procedures were based on those developed by Chalmers and Altman (1995) and aimed to minimize selection bias and make explicit the methods used to conduct the review. While systematic review procedures are usually used to assess the effectiveness of interventions, the purpose of this paper was to examine what is known about the safety behaviours parents use on an everyday basis and the factors influencing those behaviours, and systematic review methods were used to guide the examination of this body of research.

The search strategy was developed to identify current research knowledge on home safety-related behaviours of parents of young children (less than 5 years of age) and to examine factors (cognitive, social and environmental) that affect safety behaviours. The key questions that the review aimed to address were: 1) What behaviours do parents use to prevent home injuries to young children? 2) What factors are related to parental home safety practices? and 3) How are parental safety behaviours related to home injuries in young children? The following nine electronic databases were searched: Medline (1966-2005), Embase (1988-2005), PyschInfo (1985-2005), CINAHL (1982-2005), Cochrane Database and CBM reviews (all dates),

Sociological Abstracts (1963-2005), Social Services Abstracts (1980-2005), and Eric (1966-2005). Handsearching procedures were also used to identify articles not available through the electronic databases. Handsearching included examination of ten review articles published after 1985, reference lists of relevant articles relevant, and review of abstracts listed on a web-based compilation of injury prevention abstracts from the SafetyLit Injury Prevention Literature Update Website through to the end of 2005 (San Diego State University). The inclusion/exclusion criteria for this literature review (see Table 1.0) were developed using established guidelines (Klassen, Jadad, & Moher, 1998).

Table 1.1

Inclusion/Exclusion Criteria

Study Element	Inclusion	Exclusion
Participants	Parents (mothers or fathers) of young children 1-5 years of age who form either all or part of the study sample	
Area of focus	Studies on parental safety behaviours or factors influencing those behaviours in relation to general child home safety and unintentional injury prevention in the home setting	Intervention studies Single focus studies e.g. baby walkers, smoke detector use Studies focused on children's behaviours or attitudes
Outcomes	Parental safety behaviours Home safety hazards. (Child injuries may or may not be included as study outcomes)	
Study design	Quantitative and qualitative studies	Experimental studies Intervention evaluation studies
Time period	1985 – 2005	
Languages	English	
Countries	Industrialized, developed countries	
Type of studies	Published and unpublished	

Additional steps in the review included assessment of study relevance, development of a data extraction form and extraction of study information followed by entry of key information into a database. To keep within the scope of this paper, certain steps considered part of a formal systematic review process were not used such as having two independent reviewers assessing study relevance and quality.

Assessment methods for ascertaining study quality have been well developed to assess randomized controlled trials of intervention effectiveness (Chalmers & Altman, 1995). There have also been a number of efforts to develop criteria for assessing non-randomized studies (Bunn, DiGuiseppi & Roberts, 2001) and these methods refer primarily to the assessment of case-control and cohort studies. In this review, many of the studies used cross-sectional survey-based designs and, according to Glasziou, Irwig, Bain and Colditz (2001), there are no standard accepted quality scales for descriptive survey research. Thus, consideration of study quality for the quantitative studies was based on features including random selection of participants, study response rates and whether definitions of measures were clear. The evaluation of the qualitative studies was based on several sources including Lincoln & Guba (1985), Loiselle, Profetto-McGrath, Polit & Tatano Beck (2004) and Rowan & Huston (1997), while the evaluation of mixed methodology studies was by informed the work of Sandelowski (2000).

The electronic database searches yielded 1114 potentially relevant articles and the handsearching yielded an additional 43. Abstracts of 750 articles were reviewed and 161 of the articles were reviewed in full for relevance. Data extraction was conducted on 38 studies (listed in Appendix 4) that met the relevance criteria. An overview of key research components of these studies are presented in Appendix 5. Furthermore, experimental studies conducted in laboratory settings to study parental risk perceptions or cognitions using simulated scenarios were excluded since these situations are less reflective of naturally occurring in-home injury situations.

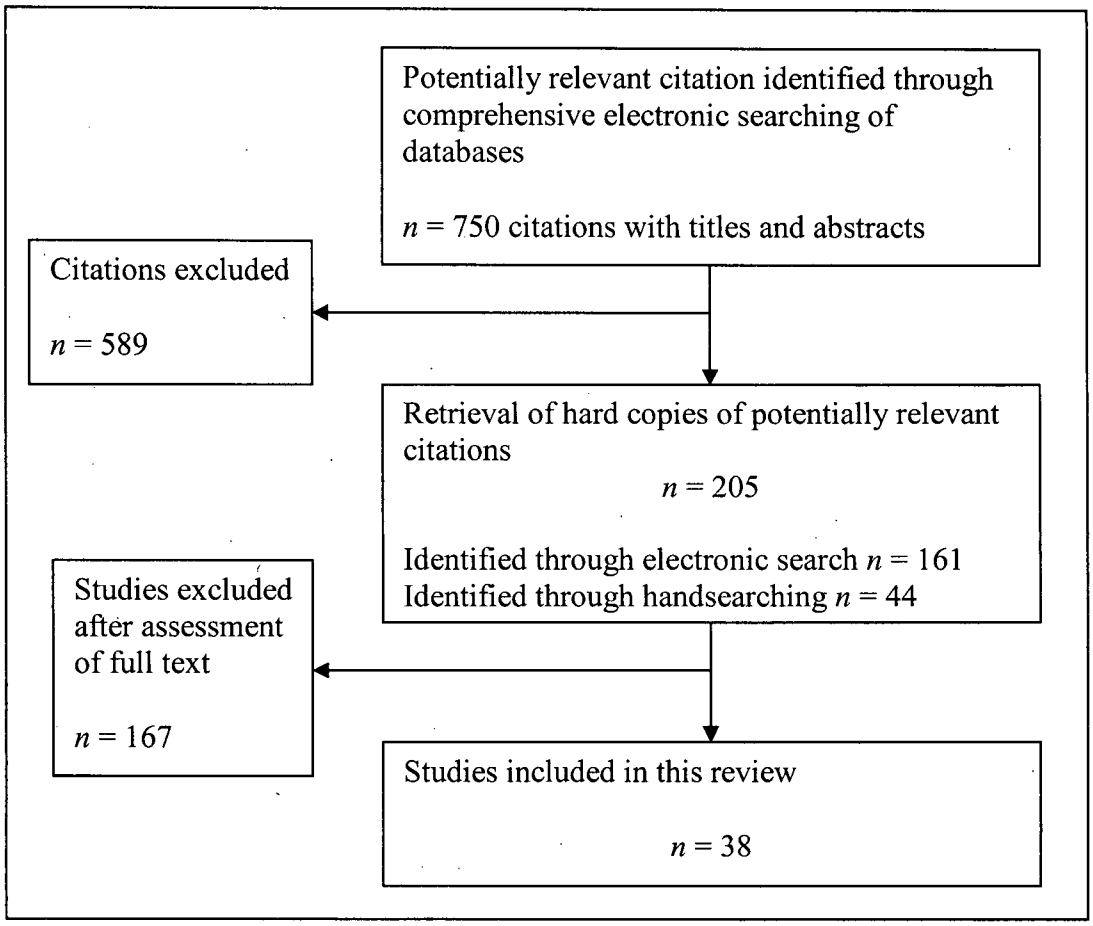

Figure 1.1 Identification of relevant literature on parental safety behaviours and influencing factors.

The core 38 studies were further analyzed to identify how the results have contributed to knowledge development in the area of parental child safety behaviours and influencing factors. Methodological and theoretical issues across the studies were identified as well the assumptions underlying the various research approaches and methods.

Systematic Review of Parental Safety Behaviours and Influencing Factors: Findings

In the following sections of this review, the 38 relevant studies are assessed according to key elements including conceptual focus and design, settings and targets of the research, methods used, theory use, and key findings across the studies. Contributions from different disciplinary bodies of literature are discussed as are limitations associated with these different approaches. Based on these review findings, gaps in current research are identified and suggestions for future studies provided.

Study Conceptual Focus

The conceptual focus of the majority of the 38 studies reviewed was situated at the level of the individual and included examination of parental safety behaviours (25 studies) and parental perceptions and attitudes towards child injuries (22 studies). A total of 11 of the studies addressed determinants of, or factors that were associated with parental safety behaviours while there were only six of the studies, in which the relationships between parental safety attitudes or behaviours and child injury outcomes were quantitatively examined.

Among the studies that did examine different kinds of factors or variables associated with either parental safety attitudes or behaviours, there was a range of factors that were addressed. In 11 of the studies, cognitions or perceptions about safety or injury risks provided the conceptual focus, while in 11 studies; factors at the social level were addressed. These included factors such as social influences and subjective norms about safety behaviours (Gielen et al., 1995; Morrongiello & Kiriakou, 2004; Russell & Champion, 1996; Sellstrom & Bremberg, 1996; Sellstrom, Bremberg, Garling & Hornquist, 2000;); maternal social support (Dal Santo, Goodman, Glik & Jackson, 2004; Greaves, Glik, Kronenfeld & Jackson, 1994; Roberts, Smith & Bryce,1995); family level factors such as the number of children in the home and sibling influences (Combes, 1991; Pollack-Nelson & Drago, 2002;) and fathers' involvement in child

care (Schwebel & Brezausek, 2004). These studies were mainly quantitative with two studies using a qualitative approach.

There were also some studies that focused on factors involved with childhood injuries and parental prevention efforts that reflected influences at broader levels. For example, examination of income level or SES of study participants was addressed in seven studies (Eichelberger, Gotschell, Feely, Harstad & Bowman, 1990; Evans & Kohli, 1997; Glik, Kronenfeld & Jackson, 1991; Glik, Greaves, Kronenfeld & Jackson, 1993; Kendrick, Watson, Mulvaney & Burton, 2005; Ueland & Kraft, 1996; Vincenten, Sector, Rogmans & Bouter, 2005). Living conditions were also addressed by six studies that assessed how housing quality and levels of hazard or disrepair were related to injuries or safety behaviours. These included four quantitative studies (Dal Santo et al., 2004; Glik, Greaves, Kronenfeld & Jackson, 1993; Greaves et al., 1994; Santer & Stocking, 1991), one mixed methodology study (Roberts et al., 1995), and one qualitative study (Combes, 1991).

The relationship between community and neighbourhood level factors and parental safety behaviours and attitudes were addressed by only three studies of which two utilized qualitative approaches. These studies assessed factors such as parental perceptions of the safety of the neighbourhood including issues such as road conditions and neighbourhood problems (Combes, 1991; Evans & Kohli, 1997; Roberts et al., 1995). However, social or economic policies were not included as a conceptual focus of any of the reviewed studies. There were, however, two quantitative studies that included a focus on parental gender (Lewis, Dillilo & Peterson, 2004; Schwebel & Brezausek, 2004) and one that addressed cultural differences (Mull, Agran, Winn & Anderson, 2001) and assessed how these concepts related to parental safety behaviours.

Settings and Targets

The 38 studies examined in this review were mainly conducted in community and clinically-based settings. Although a number of studies assessed SES or income level as a study

variable, only eight of the studies were conducted specifically with parents living in low-income households or communities, suggesting that a potential bias exists across this literature towards research that has been conducted with economically advantaged and well-educated parents.

Five of the eight studies conducted in low-income settings used quantitative methods. For example, Gielen et al. (1995) used a clinic-based survey with a non-random sample of 150 low-income urban mothers, while Santer & Stocking (1991) conducted a clinic-based survey to assess the safety practices of inner city parents with children less than six years. Russell and Champion (1996) conducted a home-based survey with 140 low-income mothers with preschoolers who lived in a public housing project while Kendrick et al. (2005) assessed the relationship between in-home safety practices of mothers living in a deprived neighbourhood and their children's injuries. Evans and Kohli (1997) administered a survey in two communities of differing SES status. Two studies that were conducted in low-income settings and used mixed-methodology included research by Roberts et al. (1995) who conducted a case study in a low-income community in Scotland, and by Sparks, Craven and Worth (1994) who conducted in-depth interviews with parents of children in two communities in England that differed by income status. Finally, in a qualitative study, Mull et al. (2001) conducted interviews with low-income mothers in Los Angeles of Mexican, Mexican American and American origin.

Overall, there were only four studies that examined the safety behaviours and attitudes of low income parents in the actual home setting (Kendrick et al., 2005; Mull et al., 2001; Roberts, Smith & Bryce, 1995; Russell & Champion, 1996). Sparks et al. (1994) also conducted in-depth interviews with low-income parents, but the authors did not specify where the interviews took place. Conducting interviews in the home setting itself may allow for the collection of observational data for comparison with self-report data as was done in the study by Russell and Champion (1996).

One half of the 38 studies (n=19) focused on a target age range of children that covered a one to three year age span. The remainder of the studies addressed an age span of four years or more and in two of the larger scale telephone surveys, children up to the age of 13 years were included in a U.S. population-based random sampling survey (Eichelberger et al., 1990) and up to the age of 14 years in a Canadian random sampling survey (Hu, Wesson, Parkin & Rootman, 1996). The use of these broad age groupings reflects an assumption that developmental changes are not greatly important in determining parental injury prevention behaviours. This assumption is in contrast with findings from a recent analysis of injuries to children under 4 years by 3-month increments instead of the usual one-year increments (Agran, Anderson, Winn, Trent, Walton-Haynes & Thayer, 2003). This study used developmental groupings instead of the usual E-codes and found marked variability in rates and causes of injury by 3-month intervals that were masked by year of age analyses. Thus, risks to young children and appropriate interventions changed considerably across very small age groupings and thus research studies that assess parent behaviours across wide age ranges may not be sensitive to children's developmental changes. Therefore, examining how parental beliefs and behaviours are related to children's development needs and abilities provide an important area for further research.

Across the 38 studies examined, study samples were comprised exclusively of mothers in 22 of the studies and only two quantitative studies were found that specifically focused on both mothers and fathers. In one, differences between mothers' and fathers' beliefs about child injuries were examined (Lewis et al., 2004) while in the other, both maternal and paternal factors related to toddlers' injury risks were analyzed (Schwebel & Brezausek, 2004). In several studies, a focus on "parents" was described; however, the actual participants were virtually all mothers. This lack of clarity about participants may lead to obscuring of issues that are gender-related and there is, therefore, a need for researchers to clearly identify whether a study's focus is on mothers or both parents.

Study Design and Methods

In this next section, the study designs and methods used across the relevant studies will be summarized. These studies have been grouped into quantitative, mixed methodology and qualitative studies. For each of these, the data collection and analysis methods used will be summarized and the major strengths and limitations of the methods used discussed.

Quantitative studies. The majority (31/38; 82%) of the research studies identified in this review were quantitative with 23 of the studies using cross-sectional surveys, and eight studies using longitudinal designs.

Of the cross-sectional survey studies, participants were randomly selected in 10 studies (45%). The sample sizes in the cross-sectional surveys ranged from 62 to 2800 participants. Both in-home and clinic-based data collection were used across these surveys and most relied on parental self-report for assessing outcomes. A large variety of both behavioural and injury outcome measures were used across these studies. Univariate and bivariate analyses were conducted for the majority of these studies, although several studies utilized multivariate analytic methods. Many studies did not report reliability and validity measures for the instruments used, although several studies did report on these measures (Glik et al., 1991; Glik, Greaves, Kronenfeld & Jackson, 1993; Russell and Champion, 1996).

Two of the cross-sectional survey studies were Canadian. In one of these, 1516 participants had been randomly selected using random digit dialing in two communities (Hu et al., 1996). In the other Canadian survey, a questionnaire was administered to 113 parents recruited non-randomly from health units (Morrongiello & Dayler, 1996). Overall in the survey studies, the sample sizes were reasonably large; however, since less than half of the surveys used random selection of participants, there exists a potential problem of sampling biases across the studies. A second limitation of these cross-sectional studies is that while they do allow for

assessment of correlations between variables, the analyses cannot be used to infer causal relationships between the variables.

In the eight longitudinal studies, study instrumentation was generally more thoroughly described and reliability and validity measures provided. Furthermore, injury measures were assessed objectively using hospitalization data in only one of the studies (Kendrick et al., 2005) and were otherwise measured using self-report. Across the longitudinal studies, however, greater use was made of in-home diary completion by mothers and this provided more detailed and accurate assessments of both serious and non-serious injury events that occurred to children. The longitudinal studies also made greater use of multivariate analysis techniques and were able to provide analyses that allowed for assessment of the predictive relationships between various safety behaviours and injury outcomes.

Overall, parental home safety behaviours were assessed in large variety of ways across all of the quantitative studies and for very few were there rationales provided for behaviours selected. This reflects a major limitation across this area of research because there is little evidence in the literature as to which of these potential safety behaviours are most critical and which are linked to injury outcomes. This issue is not explicitly addressed by the large majority of researchers in this area and reflects a major research gap regarding the parental behaviours that best predict lower levels of injury among children. An exception to this was found in the study by Kendrick et al. (2005) in which the researchers examined how four specific safety behaviours predicted child injury outcomes, but the authors explained how they were unable to ascertain whether these injury reductions were directly linked to parents using those specific behaviours or whether the injury reductions were due to a more general use of safety precautions.

The selection of parental safety behaviours outcome measures without providing a rational or justification by researchers for the choices made also reflects an assumption that the

behavioural outcomes selected are feasible and acceptable to parents. A better understanding of the barriers to adoption is needed as is further understanding of how parents see their current injury prevention efforts so that critical behavioural outcomes can be determined that will be appropriate, relevant and feasible for parents to adopt.

Overall, strengths of the quantitative studies included that the sample sizes were generally large, and that there was a trend towards the use of longitudinal designs that could provide greater information about how certain preventive safety behaviours may precede injuries in time. There was also a trend toward the use of more powerful, multivariate techniques for analysis of data in more recent years. Despite these strengths, the quantitative studies were limited by a low use of randomly selected samples for survey studies, a reliance on self-report data, a large degree of heterogeneity in the outcomes assessed, and limited assessment of contextual factors affecting parental safety behaviours.

Mixed methodology studies. There were mixed methodology designs used in four of the studies reviewed. In the first, Roberts et al. (1995) used a sociologically-based, case-study approach in a low-income Scottish community to assess strategies that parents used to keep children safe despite living in adverse conditions. The researchers examined parental knowledge levels about local risks to child safety and the kinds of social strategies that parents used to manage these risks. The research methods used in this study included group interviews with parents, a household survey and case studies of injury prevention strategies in twenty households. The study also involved a parent action group as research partners and made linkages with other community organizations. The methodology used was an intensive case-study approach based on Hammersley (1992) and Mitchell (1983). The authors, however, provided little detail on the analytic procedures used in the study.

In the second mixed methodology study, Sparks et al. (1994) used a sociological approach to compare the safety perceptions of parents living in two communities. Study

methods included an initial analysis of emergency room records to determine high and low injury areas in the community, followed by in-depth interviews of parents to assess their perspectives about childhood safety and the community context. Little information was provided about the methods used for the qualitative data collection and analysis.

Morrongiello and Dayler (1996) conducted a Canadian study using questionnaires and focus groups to assess parental knowledge and attitudes towards childhood injuries and risk behaviours. Qualitative methods were used to help develop a survey tool. The results of both types of data collection allowed the authors to conclude that parents did not consider themselves as primarily responsible for prevention and that children's injuries were viewed as normative phenomena.

In the fourth mixed-methods study, Kisida, Holditch-Davis, Shandor Miles, and Carlson (2001) reported on mothers' unsafe practices in the home. This study relied on secondary analysis of parent reported data and researchers' observational field notes on parenting practices. Limitations of this study include that little information was provided on the study methods, that the original data was collected for a quantitative study and that there was no explanation of how parental behaviours were deemed safe or unsafe.

These mixed methodology studies broadened the range and depth of the contextual factors under study. However, it was not clear from any of these studies, whether there had been consideration of the complex issues related to combining methods (Sandelowski, 2000) and little information was provided on the qualitative data collection and analysis methods.

Qualitative studies. There were three studies reviewed that used qualitative methods to assess parental safety beliefs and behaviours. In the first of these studies, focus groups were used to ascertain mothers' beliefs about injuries and their preventability (Bennett Murphy, 2001). In this study, focus groups were held with young mothers of children three years or less who were attending a support group. Data collection procedures and steps of data analysis in this

study were well-described and findings provided insight about the salience of injury prevention issues for young mothers in particular.

In the second qualitative study, ethnographic methods were used to explore cultural perspectives regarding child safety practices for three different cultural groups in the United States (Mull et al., 2001). Three groups of low-income mothers were purposively selected and included Mexican (n=50), Mexican American (n=50) and non-Hispanic white mothers (n=30). Study methods were well described and included semi-structured questions and observations of environmental conditions in and around the homes as well as maternal and child behaviours. While little information was provided on how the data was coded and analyzed, the findings revealed cultural differences in safety practices among the different groups of mothers. The findings were also validated with people knowledgeable about safety issues in the community. The researchers provided suggestions for culturally appropriate intervention strategies and this study served as an example of how ethnographic methods can contribute to better understandings of injury prevention issues in specific high risk groups.

The third qualitative study identified was an unpublished report by Combes (1991) from the UK in which both parents' and children's perceptions and views on safety were examined through an action research project that included parent discussion groups held at four study locations. This study described parental perceptions about their responsibilities for prevention as well as a wide range of challenges that parents encountered as part of their safety-related efforts.

According to Lincoln and Guba (1985) there are four key aspects of trustworthiness of qualitative studies that correspond to the concepts of reliability and validity in quantitative research. The four aspects include: credibility, transferability, dependability and confirmability. In the study by Bennett Murphy (2001), there was only minimal description provided about study procedures to evaluate study trustworthiness. For the two other qualitative studies, study credibility was supported by triangulation of methods, verification of findings with

knowledgeable professionals, and extended periods of engagement and observation. The studies by Combes (1991) and Mull et al. (2001) also showed the greatest degree of transferability or fittingness for the current study focus since both studies addressed the home safety related experiences of parents living in the general community. Overall, the studies by Mull and by Combes provided in-depth and rich information about the challenges and issues faced by parents and mothers in ensuring their children's safety, however, neither study provided adequate detail on how the data were analyzed.

Theory Use

Of the 38 studies reviewed, theory use was described as underpinning the study approach and informing the research questions in 15 (40%) of the studies. Seven of the studies referred to the Health Belief Model (HBM), five to the Theory of Reasoned Action (TRA), four studies referred to risk perception theory, and three studies referred to the following theories: health locus of control, Weinstein's Precaution Adoption Process, and to psychological theory of resilience in child development.

The HBM and the TRA were the most frequently described across the studies. These are both widely used health behaviour change theories and reflect a theoretical approach that is focused on the level of the individual (Gielen & Sleet, 2003). The HBM (Janz & Becker, 1984) focuses on how people perceive their susceptibility to a health problem as well as their perceived severity of the problem along with the benefits and barriers to action (Glanz & Rimer, 1995). The TRA (Fishbein & Ajzen, 1975) addresses how people's behaviour is a function of their intention to perform the behaviour as well as their attitudes about the behaviour and the subjective norms they hold. While these are both individual-level theories that reflect an intra-personal focus, the TRA also includes the inter-personal level, since it takes into account the influence of other people on a person's behaviour (Gielen & Sleet, 2003).

Across many of the quantitative studies, the authors referred to particular theories, however, there were only seven of the quantitative studies in which it was evident that the theory had formed an underlying basis for the study design. The following highlights how behaviour change and risk perception theories were utilized in these studies.

Gielen et al. (1995), for example, used Fishbein & Ajzen's Theory of Planned Behaviour to guide the study design and selection of key variables. The only component from the model, however, that was helpful in predicting parent safety behaviours was that of "beliefs about barriers." The authors suggest that either the Health Belief Model or Weinstein's Precaution Adoption Process may more useful for assessing salience and perceptions of seriousness about injuries especially in environments where poverty and other social problems may affect the perceived importance of injury prevention.

Glik, Greaves, Kronenfeld & Jackson (1993) also used the Theory of Planned Behavior as a theoretical framework to measure relationships between attitudinal/cognitive variables and hazard perceptions and household injury risks. They found that the most important predictors of observed hazards were socioeconomic factors, maternal supervision and housing repair, and concluded that the use of this cognitive and attitudinal theory for predicting household injury risks was not supported. Theories based exclusively on cognitive factors may, therefore, not address an adequate range of variables affecting parent safety behaviours and suggest the need to look to broader based theories that address social and environmental factors.

Russell and Champion (1996) developed an instrument to measure maternal childhood injury beliefs and social influences among low-income women based on the HBM as well as Fishbein & Ajzen's TRA that was used to expand the behavioural constructs to also include subjective norms. This survey was administered to 140 low-income mothers; the authors reported finding that self-efficacy and perceived barriers to safety actions were both significantly correlated with household hazards, findings that supported use of the HBM theory. The barriers

assessed included low access to injury prevention information, fatigue, and inefficient household management. The authors suggested that mothers' perceptions about their personal ability or self-efficacy to engage in safety actions may be a better predictor of actual behaviour change than their perceptions about level of hazard or injury risks present in the home.

Morrongiello and Kiriakou (2004) also used both the HBM and the TRA as a basis for their study of the determinants for mothers' safety practices aimed at preventing six different types of common injuries. The authors reported finding that mothers' beliefs about their child's vulnerability to injuries was related to their engagement in injury prevention strategies, but that the importance of these beliefs varied depending on the type of injury. Furthermore, aspects of the HBM including perceived severity, effort, and preventability were not found to directly influence maternal precautionary practices.

Theories of risk perception, based on the work of Tversky and Kahneman (1974) and Slovic, Fischloff and Lichtenstein (1982), were also utilized by researchers. Risk perception theory formed the basis for studies on parental perceptions of child injury risks by room type (Garling, Garling & Maurizton-Sandberg, 1989) and whether mothers believe that supervision decreases injury risks to children (Garling & Garling, 1993). These studies based on risk perception theory are helpful for developing knowledge about the cognitive mechanisms used by mothers to make judgments about levels of risk to children's safety in the home; however, they are limited in their focus on individual cognitions.

For the mixed-methodological and the qualitative studies, theory was used in several different ways to provide underlying bases for the various research perspectives. For example, the methods described by Roberts et al. (1995) in their case study conducted in Corkerhill, Scotland were informed by a critical theory approach grounded in a sociological perspective and evidenced by an action research focus and the study of class and power issues in the community. An ethnographic, constructivist orientation in this study was also evident from the emphasis on

developing understandings of lay meanings about child safety and valuing local knowledge about safety risks and conditions. In the British study by Sparks et al. (1994) the researchers demonstrated a critical ethnographic orientation through the description of their study focus on the subjective definitions of the situation and the cultural meanings, as well as their focus on examining different social understandings in high and low income neighbourhoods. In the qualitative study by Mull et al. (2001), an anthropological lens was used to assess culturally linked characteristics underlying safety behaviours. Finally, a social action approach was used by Combes (1991) to study the perceptions and understandings of both young children and parents about injury prevention and views on safety. In this study, discussion groups were used for data collection with an aim to initiate changes in the local community. While the various theoretical approaches used across these mixed-methodology and qualitative studies were minimally described, they reflected a disciplinary focus and provided a methodological basis to the research which Morse (1992) regards as a suitable way for theory to be used in qualitative research.

It was not feasible to fully evaluate the utility of different theories for explaining parental safety behaviours across the 38 relevant studies since less than half of the studies referred to the use of theory and in many of the studies, the design did not adhere closely to the theory used. There were five studies in which the designs were based on a behaviour change theory including the Health Belief Model and the Theory of Planned Behavior. However, the findings from these studies, on the whole, indicated that changes in parental safety behaviours were not well explained by these theories.

Synthesis of Systematic Review Findings

The following summarizes key findings from the quantitative, mixed methodology and qualitative studies from the 38 relevant studies. From the quantitative studies, findings are included from studies that utilized both cross-sectional and longitudinal designs.

Quantitative, cross-sectional studies. Of the 23 survey studies, there were 10 that used random selection of participants. Three of the 23 studies were conducted with lower income populations, with participants that were selected non-randomly. Among the studies that used random selection, seven studies examined levels of parent reported home safety practices. Comparing the findings on home safety practices across these studies was difficult because of the wide variation in the definitions and operationalization of the outcome measures. In the three quantitative studies with lower income groups, two behaviours were reported across all three studies and showed reasonably similar levels. Firstly, the prevalence of the use of stair gates was reported at 55% by Santer and Stocking (1991), at 41% by Gielen et al. (1995) and at 45% by Kendrick et al. (2005). The use of smoke detectors was reported at the following levels across the studies: 75%, 76% and 83%, respectively.

Many of the survey-based studies addressed research questions regarding the kinds of factors that were related to parental safety behaviours and several reported an association between lower SES and lower levels of safety practices or higher hazard levels (Glik, Kronenfeld & Jackson, 1993; Glik, Greaves, Kronenfeld & Jackson, 1993; Greaves, et al., 1994; Hu et al., 1996), however, this finding was not entirely consistent. One study found that lower SES was related to higher levels of safety practices (Evans & Kohli, 1997) while other studies found no differences between high and low income groups. Vincenten et al. (2005) reported finding that lower income parents were more likely to report using supervision as a main strategy to ensure their child's safety while higher income parents were more likely to report the use of specific safety products. Other factors found to be associated with lower levels of safety behaviours included: mother working (Mulligan-Smith, Puranik & Coffman, 1998); higher maternal stress (Glik, Kronenfeld & Jackson, 1993); supervision style (Greaves et al., 1994); poor house repair (Glik, Greaves, Kronenfeld & Jackson, 1993; Greaves et al., 1994); low levels of social support (Greaves et al., 1994); and social norms (Sellstrom & Bremberg, 1996).

Furthermore, from the survey studies focusing on low-income households, increased parental safety behaviours were found to be associated with mothers' self-efficacy along with previous injury experience, knowledge, age, and child's birth position (Russell & Champion, 1996), while low levels of parental safety behaviours were associated with low income, perceived barriers and poor housing quality (Gielen et al.,1995).

The survey research also assessed the kinds of factors that were associated with parental perceptions about engaging in safety behaviours. In a survey study conducted in a low income population, Gielen et al. (1995) found that parents generally held positive attitudes towards safe proofing the home. In another survey-based study that compared higher and lower income communities, Evans & Kohli (1997) identified through survey methods that parents in both lower and higher income communities held similar levels of safety concerns, but that parents in the more disadvantaged community expressed greater concerns about the safety of the neighbourhood and about having enough money available to make safety changes. Contrasting results were found in two studies conducted with middle income participants, whereby parental safety perceptions were not found to be associated with income status. In one survey of 1200 people, parental risk perceptions were predicted by previous injury to the child, stress, and perceptions of the child as hard to manage (Glik, Kronenfeld & Jackson, 1991), while in a Swedish study of 870 mothers (Sellstrom et al., 2000), the only significant predictor for maternal risk perceptions was the causal attribution of injury to the child. Vincenten et al. (2005), however, reported finding from their survey of European parents that younger low income parents were more likely than higher income parents to agree with the statement that most injuries to children can be avoided.

The findings from the survey studies with low income parents also identified barriers that parents may face in their efforts to implement safe practices. For example, individual level barriers were reported to include maternal fatigue, inefficient household management, having

limited access to safety information (Russell & Champion, 1996), having a low income and frequent moves (Gielen et al., 1995) while environmental barriers included having a poorly or unsafely built home (Gielen et al., 1995).

Many of the cross-sectional survey-based studies reflected use of descriptive epidemiological approaches to examine parental safety behaviours. There were, however, survey studies that drew from behaviour change theories to guide the research design. While these latter studies addressed a greater range of contextual factors such socio-demographic, social and environmental factors, the conceptual foci of the survey-based studies overall were mainly situated at the level of the individual parent.

Quantitative, longitudinal studies. Eight studies in this review utilized longitudinal designs and these studies contributed to improved understandings about the relationships between parental safety behaviours and child injuries. Methodological approaches used included a cohort study nested within the control arm of an RCT, analysis of data from a national longitudinal study as well as five studies that used in-home collection of behavioural and child injury data over time using surveys, interviews and parent-completed diaries and medical records.

One prospective, cohort study from the UK provided evidence for linkages between specific parental safety behaviours and injury outcomes (Kendrick et al., 2005). This study was a cohort study nested within the control arm of a larger RCT study examining the effectiveness of a home safety intervention for 2357 children. The cohort study consisted of a sample of 1717 families with children under 5 years that was drawn from the control arm of the RCT and these families were followed for two years. This study examined the relationship between safety behaviours, child injuries and socioeconomic status among the participants. The key findings from this study included that families with fitted stair gates, fitted and working smoke alarms, and who stored sharp objects safely had lower injury-related rates of admissions to hospital (43%, 45%, 55% respectively). Furthermore, those parents who reported a higher number of practices

had children with significantly fewer injury-related hospital admissions. These safety practices were found to predict injuries as well as the child poverty index. Strengths of this study included a focus on low income families, use of validated measures and use of researcher observation for behavioural outcome assessment. As the authors acknowledged, this study was not able to show whether there were direct links between parental use of key safety behaviours and decreases in the kinds of injuries those behaviours aimed to address (for example, linking smoke detector use with a change in burn rates), or whether parental engagement in these key behaviours somehow affected a broader range of injury causes. As the authors explain, the families who were "safe" by utilizing the key safety behaviours measured in this study, may also have been "safer" in other ways. The authors suggest there is a need for further exploration of factors related to lower injury rates among families who engage in range of safety behaviours including parental beliefs and perceptions about the preventability of childhood injuries as well as the necessity and potential success of engaging in safety measures.

Two longitudinal studies conducted by Morrongiello, Ondejko & Littlejohn (2004a, 2004b) extended findings of previous studies regarding to the nature of the relationships between injury outcomes and parental safety behaviours. In the first of these two studies (2004a), the authors used multiple methods of data collection to study the nature and context of home injuries, and the child and parent factors that increased injury risks. Mothers (n=62) of toddlers completed questionnaires, injury event recording diaries and home interviews and were followed over a three month period. The major findings of this study included that girls and boys differed in a variety of ways including the kinds of injuries they suffered. In addition, significant predictors of injuries included injury risk taking by the child and fewer injuries among children whose mothers had higher protectiveness scores.

In the second study (Morrongiello et al., 2004b), the researchers examined how mothers managed child injury risks and compared the effectiveness of three types of safety strategies:

decreasing access to hazards, supervision and teaching. Data were collected from 62 mothers over a 3-month period using the same data collection methods as the 2004(a) study. The results showed that use of child-based strategies (teaching) was associated with a higher risk of injuries while the use of environmental (removing access to hazards) and parent-based strategies (supervision) were associated with lower injury risks. In these latter two studies, the participants were all married mothers currently living with spouses, who were not working outside the home and who were mainly living in middle-income families. The nature of this sample may limit the applicability of the findings to lower income or single-parent mothers.

In an additional cohort study, by Garling and Garling (1995), 150 randomly selected mothers of 1, 2, and 3-year olds recorded both anticipated and unanticipated child injury events in diaries over a 7 day period. In this study, it was found that the type of safety actions used by mothers depended on the age of the child. While mothers reported using activity restrictions and changes to the environment more with one-year olds, these behaviours shifted to a greater use of teaching strategies with three-year olds. Similarly, Gralinski & Kopp (1993) reported how mothers shifted from an early emphasis on safety rules to an emphasis on independent behaviour and family routines. Mothers were also found to balance child socialization needs with safety needs in the study by Morrongiello et al. (2004b). This was illustrated by the finding that mothers used teaching strategies to a greater extent for the living room, where they expected greater compliance from children with safety rules.

Peterson, DiLillo, Lewis and Sher (2002) also conducted a longitudinal study of mothers' proactive and reactive injury prevention efforts for toddler's ages 18-36 months using parental diaries and regular interviews over 6 months. In this study, data was collected on 4290 injuries. Although 94% of these were minor in nature, one out of three injuries was classified potentially serious. There was a low, but positive (and unexpected) association between mothers' proactive

interventions and injuries ($r=.17$, $p<0.05$). The sample in this study also consisted of well-educated, middle income mothers.

Finally, in the last diary-based study by Dal Santo et al. (2004), 159 mothers of children ages 6 months through 5 years were surveyed and completed in home diaries over a one-year period. This study was conducted with a sub-sample of a larger study by Glik, Greaves, Kronenfeld & Jackson (1993). Injury risks were found to be related to homes needing repair, but were not related to stress or a lack of social support. Higher levels of maternal supervision were also found to be associated with lower risks of injury, but only among mothers with low levels of perceived risk of injury. The authors also point out study limitations that included under-representation of low income families, a small sample, and low reliability of some of the study measures.

Strengths of these longitudinal and diary approach studies included the use of multiple study measures, the use of instruments with established validity and reliability as well as measuring injuries both prior to and during the study. The samples, however, consisted of mainly married, non-working, college-educated and middle income mothers.

The longitudinal studies provided greater analytic power to assess the processes occurring at the level of mother-child interactions, such as child supervision, and how these processes affected injury outcomes. These studies were based in developmental psychological and behavioural science disciplinary approaches; however, contextual factors were assessed only to a limited degree across these studies.

Mixed methodology studies. There were three studies that used mixed methodology approaches. In the first of these studies by Roberts et al. (1995), it was reported that parents had high levels of knowledge regarding injury risks in the local environment and this served as source of parental anxiety. Depression and worry were also found to serve as barriers to child

safety efforts; however, the authors also reported how parents made use of socially-based safety strategies such as informal support and care giving networks.

In the study by Sparks et al. (1994), the authors reported how parental perceptions differed considerably between two communities of differing SES with many more parents in the lower income area reporting that they believed their area to be an unsafe place to live, and that more than half viewed their homes as unsafe and lacking safety measures. The majority of parents in both low and high income communities viewed child injury as preventable; however, the majority also considered it likely that their children would experience a minor injury in the next month and this was viewed by many as normative. Some of the differences found included that those in the lower income community expressed greater worry about risks of serious injury to their children and that they found it difficult to keep them safe. Parents from the lower income community also reported more near injury misses among children than parents in the higher income community. Furthermore, parents in the lower income community saw the "Council" as holding responsibility for injury prevention in the wider environment while in the higher income community parents were more likely to see themselves as holding the major responsibility. Sparks et al. also described in their findings how parents used "zones of control" as a way to apply safety rules for children inside and outside the home and suggested that parents living in disadvantaged circumstances experience more challenges in applying the kinds of rules that help in managing safety risks.

In the focus group and survey-based study by Morrongiello and Dayler (1996), the researchers reported how parents demonstrated knowledge about injury risk factors, and that most of the parents did not routinely consider child injury possibilities in their daily activities. The survey component of the study also showed that a majority (74%) of parents viewed child injuries as a natural result of play and 70% believed that children's injury experiences could help them learn about risks. Reasons provided by parents for choices that placed children at increased

risk included issues of convenience, stress, prioritizing their own goals, and beliefs in their ability to keep children safe in dangerous situations. Furthermore, parents did not indicate strong beliefs that they considered themselves holding primary responsibility for the prevention of child injuries.

The findings from these mixed methodological studies contributed to knowledge about how parents may hold complex and contradictory beliefs about child injuries and that these perceptions may differ among those living in higher risk communities. Through the use of both quantitative and qualitative approaches, these studies provided rich information about contextual issues and, in the case of Roberts et al. (1995) and Sparks et al. (1994) also provided thorough descriptions of the injury profiles of the communities studied. Findings from Roberts et al. and from Sparks et al. also extended previous research by describing how parents used specific strategies to manage child safety risks and how these strategies were affected by challenges of living in lower income conditions.

Qualitative studies. Three studies were identified in this review that used qualitative methods including ethnography, action research and focus groups to explore parental perspectives and perceptions regarding child safety. The qualitative study by Mull et al. (2001) was the only qualitative study that was conducted with low-income families. Mull et al. described how cultural differences were found in the child safety practices used by mothers. The authors described how, despite being poorer, less educated and living in crowded and more hazardous conditions, the Mexican families displayed strong family bonds and traditions that included extended family and older siblings providing supervision for younger children. Furthermore, the researchers described how the Mexican mothers, while recognizing hazards in the home, would not always take remedial action. This inaction was related to a variety of factors, such as attitudes that nothing bad would happen, a lack of education, reliance on decision making by fathers, fears about confronting landlords, and adherence to cultural norms

that the role of a "good wife" included adequately watching her children. In contrast to the Mexican mothers, the authors reported how the Mexican American and white mothers in the study lacked support and good parenting models.

Findings from the qualitative study by Combes (1991) from the UK included how parents saw themselves as mainly responsible for children's safety and for teaching them about safety. While the qualitative methods used in this study were only minimally described, the findings provided important insight into how factors in the broader environment, such as housing and road safety, affected risks. Furthermore, the findings also addressed how family level factors such as sibling relationships and home-work conflicts contributed additional safety challenges.

In the third qualitative study that used focus groups, Bennett Murphy (2001) reported that young mothers in the study did not identify injuries as an important part of their responsibilities as mothers, however, the study methods used were minimally described and the findings were specific to mothers who were participating in a support group.

The studies utilizing mixed methodologies and qualitative approaches contributed to knowledge development in this research area by addressing a broader array of contextual factors than did other research approaches and allowing issues related to family, neighbourhood, cultural and gender to emerge. The theoretical underpinnings of these studies drew more from the social sciences including sociology and anthropology, and contributed a rich source of ideas and themes from which hypothesis can be developed. Gender issues, in particular, have been researched only minimally and comprise an important area for further exploration. Qualitative approaches are well-suited for examining gender-based issues related to mothers' child safety efforts and to address the research gaps that currently exist regarding the safety efforts of mothers living in low-income conditions.

Discussion

Previous systematic reviews in the field of childhood injury prevention summarizing the literature on the effectiveness of general home injury prevention intervention strategies have provided little evidence about the kinds of strategies that are most effective and how they can improve safety behaviours among low income families. Since this initial review of intervention research was completed, Kendrick et al. (2006) have published a Cochrane database review of studies evaluating the effectiveness of home safety education interventions among families with children less than 19 years. Eighty randomized and non-randomized trials were included in this review and 37 studies were included in a meta-analysis. The review provided further evidence that home safety education interventions were effective in increasing safety practices, but there was no evidence of impacts on child injuries. This review also included sub-group analyses for different social groups and reported finding evidence of greater intervention effectiveness among some higher risk groups for some behavioural outcomes. For example, there were higher levels of stair gate possession reported by families living in rental accommodation and higher levels of electrical socket cover use among families with at least one unemployed parent. The authors suggest that qualitative research efforts are needed to explore why some interventions might be more effective in some social groups than others.

The review undertaken in this current study aimed to synthesize research on the different kinds of safety behaviours that parents use in the home, evidence about how parental behaviours are related to child injury risk, and research on the kinds of factors that influence safety behaviours. Review and appraisal of this body of knowledge is an important step in developing a base for the design of interventions aimed at preventing injuries to children living in low-income households.

Parental Safety Behaviours

The quantitative, survey-based research contributed an array of findings regarding parental use of safety behaviours, however, the inconsistency of measures across these studies made this information difficult to summarize. There were, however, some consistent findings across the survey studies conducted with lower income families. For example, three studies showed that between 75% and 83% of parents used smoke detectors, while only approximately half of parents in the same three studies used stair gates. Few of the survey-based studies were conducted with lower income families.

The longitudinal studies contributed important findings regarding the relationships between mothers' safety actions and child injury outcomes. The cohort study conducted with lower income families by Kendrick et al. (2005) provided evidence that parental engagement in three specific safety strategies (use of stair gates, use of smoke alarms and safe storage of sharp objects) was associated with reduced child injuries. The studies by Morrongiello and colleagues identified by way of self-reported diary data, how mothers used three different types of safety strategies including child-based (teaching), parent-based (supervision) and environmental (reducing hazards) with the child-based strategies reported as the least effective in preventing injuries. These studies were, however, conducted with middle-income and middle-class mothers and the barriers that lower income mothers may experience in using environmental and parent-based strategies needs further exploration.

The mixed methodology and qualitative studies provided additional insights into the kinds of strategies used by parents and did so by privileging parents' own perspectives on their efforts. Strategies such as the use of social networks and cultural traditions that emphasized the role of extended family were identified as ways that parents enhanced their safety efforts. Only two of these studies, however, were focused specifically on the perspectives of mothers living in low income conditions. Thus, this is an area of research where further insight is needed because

mothers are most often the primary caregivers of young children and little is known regarding the strategies that they use to keep children safe while living in economically deprived conditions.

Factors Affecting Parental Safety Behaviours

Another purpose of this systematic review was to assess research findings about the types and levels of factors that affect parental safety behaviours in the home. Individual level, cognitive factors, such as beliefs and attitudes, were most frequently identified as factors associated with parental safety efforts across the studies reviewed. In terms of these intrapersonal factors, findings from the survey research indicated that lower levels of safety behaviours among mothers were associated with lower feelings of self-efficacy, stress, supervision style, and perceptions of the child as hard to manage. The survey study findings also indicated that lower income parents had positive attitudes towards childproofing as well as heightened levels of concern about risks compared to higher income parents. While the longitudinal studies provided little information on broader contextual variables and factors that influenced safety behaviours, the mixed methodology studies identified how parents' feelings of depression and anxiety played an important role in safety efforts. The qualitative studies provided additional information about the role of attitudinal factors such as beliefs about the preventability of childhood injuries as well as about children's injury risks. These latter qualitative studies addressed to a greater depth some of conflicting ideas that parents held about safety and injury prevention issues. This is an area where further information regarding the beliefs and attitudes of lower income parents is needed.

Across the research methodologies, interpersonal or social factors were identified as also playing important roles in parental safety efforts. From the survey studies, social norms and social support were found to be related to safety efforts, while the longitudinal studies identified how some of the interactional processes between mothers and their children were related to

safety efforts and injury occurrence. The mixed methodology and qualitative studies identified how a variety of social factors played a role in parental safety efforts including social support, cultural norms in terms of the role of extended family and siblings as well as issues of power and control in the household. In a recent study that was published following the completion of the systematic review, Mulvaney and Kendrick (2006) assessed the association between safety practices and depressive symptoms, stress and lack of social support among mothers living in a disadvantaged area. This study found that mothers who reported lacking social support were more likely to store medicines unsafely. In addition, mothers who reported higher levels of stress were also found more likely to store sharp objects unsafely. Thus, this recent research has provided further insights into the association of social variables and the safety practices of lower income women with young children.

In the systematic review of the 38 parental safety behaviour studies, the effects of external, physical environment factors on parental safety efforts were addressed mainly by the mixed methodology and qualitative studies although survey studies did identify that housing quality negatively affected safety behaviours. More in-depth information, however, was provided from the mixed methods and qualitative studies regarding environmental factors such as traffic concerns, hazards associated with high-rises and poorly built homes, lack of safe play spaces that were all found to be linked to parental safety efforts. This area is one in which there remains a need to document the specific challenges related to the physical environment for low-income families. Across all of the research studies, community level factors were minimally addressed although Gielen and Sleet (2003) consider poverty to be a factor at this level. While the qualitative and mixed methodology studies examined different ways that poverty presented challenges for parental safety actions, the quantitative studies provided conflicting findings on whether poorer parents engaged in lower levels of safety behaviours than more affluent parents.

Based on this summary of parental safety behaviour studies, several recommendations for research can be suggested. Firstly, there is a need for further quantitative research studies to provide additional evidence of links between safety behaviours and injury outcomes. This could be done through additional prospective studies that follow parents and children over time, or through case control studies that identify key behaviours or set of behaviours that protect children from injury occurrence.

Two recently published studies have used such approaches and have provided additional evidence about links between parental safety behaviours and child injuries. These studies were both published after completion of the initial literature review which identified research through to the end of 2005. In the first of these studies, Morrongiello, Corbett and Johnston (2006) utilized a diary methodology to collect data from mothers about their types and levels of supervision levels and child and mother activities during the day. The findings from regression analyses revealed that mothers' reports of children's past medically attended injuries were predicted by a scored measure of their supervision. This study was conducted using a sample of well-educated, middle income, married mothers and thus the findings may not be generalizable to lower income families.

The second recent study identified in the literature used a case control design using emergency department records of children less than seven years and reported finding that the homes of children who had been injured differed from the homes of non-injured children (LeBlanc et al., 2006). These differences related to the presence of smoke detectors, baby walkers, choking hazards and no child-resistant lids on household products in the bathroom. Case homes did not, however, differ from control homes in the mean number of hazards found. The applicability of the findings to lower income families, however, is not clear as income levels were not reported.

Therefore, there is a need to further explore the behaviours that are used by low-income parents to identify the kinds of efforts that they view as most important for keeping their children safe. This research would be best accomplished through qualitative methods to give voice to parents' own perspectives and to better understand the range of values and perceptions held by parents, especially those who raising children in lower income households.

An underlying theoretical basis was described in less than half of the studies assessed in the systematic review. For those studies that did describe theory use, cognitive-behavioural theories such as the Health Belief Model were most frequently cited across the quantitative studies. In the mixed-methodology and qualitative studies, however, a wider range of theoretical approaches were used such as cultural and sociological perspectives that allowed for a broader range of contextual issues to be addressed across these studies. Research is needed that utilizes a variety of theoretical perspectives to explore factors influencing safety behaviours at multiple levels including the intrapersonal, interpersonal, physical environment and community levels including institutional and policy levels factors. This research review identified a lack of in-depth information regarding factors at many of these levels and thus additional qualitative and quantitative research is needed to explore the range of perceptions and beliefs that parents hold about the prevention of childhood injuries as well as how social relationships influence their behaviours. There is also a need for greater understanding of the role of gender in safety efforts. Future studies providing insight into parental perspectives on how factors at multiple levels affect safety efforts could eventually help to inform both the design of effective preventive interventions as well as the design of multi-level research studies.

In the field of injury prevention to date, there has been a failure to utilize health behaviour theories for the design of effective interventions (Gielen & Sleet, 2003). The use of health promotion planning frameworks such as the Precede Proceed Model developed by Green and Kreuter (2005) can provide a theoretical perspective for intervention planning that utilizes an

ecological perspective for public health issues. In order to make effective use of this kind of planning framework, a fuller understanding of the influencing and contextual factors that influence safety behaviours at a variety of levels is needed. For these reasons, it is important to better understand the kinds of factors that influence parental safety efforts in the home, and in particular, the efforts of low-income mothers.

There are several ways that new research efforts can help to move the field childhood injury prevention forward. Additional quantitative work is needed to identify key behaviours and priority indicators to reduce the current reliance on a multiplicity of outcome measures and definitions of recommended safety actions. This increased focus would help to determine effectiveness of intervention studies and to do so more consistently across studies.
There is also a need for additional research to develop better understandings of parental perspectives on child safety that is based on a wider range of theoretical approaches. The use of ecological perspectives as well as studies that utilize feminist, sociological and cultural theory in addition to behaviour change theories are all needed. This would include research to obtain fuller understanding of how mothers, in particular, experience safety efforts and how various barriers, including gender issues, affect these safety efforts. Developing fuller understandings of the range and complexity of factors that may affect parental safety efforts, and how the efforts of low-income mothers in particular are both challenged and supported, will assist in the development of interventions that are better tailored to the needs of lower income families.

In summary, this chapter has included a review of current evidence from general home childhood injury intervention studies as well as a systematic review of studies on parental safety behaviours in the home and the factors influencing those behaviours. From this review, key findings have been summarized and directions for additional research has been suggested for furthering understandings about the efforts made by low income parents to keep their children safe from injury in the home environment.

This review of literature has laid the groundwork for conducting the research study described in this dissertation. Overall, the study was focussed on using a qualitative approach to broaden understandings of how mothers living in low-income households kept their young children safe and protected them from injuries in the home environment. The study also aimed to improve understandings of mothers' own perspectives as well as on the kinds of contextual factors that helped or hindered their efforts. Thus, the theme of this study was the exploration of the ways that mothers' strove to keep their children safe in low-income home environments and how contextual factors shaped their efforts. Increased understandings of mothers' efforts and the contexts in which they are situated may help to illuminate different factors that may be linked to children's unintentional injuries, and that may place children living in lower income households at greater injury risk.

This study was conducted in a community setting and involved mothers who were the primary caregivers of one or more children between 1 and 5 years old and who were living on a low-income. Home visits were conducted for all participants and data was collected through in-depth interviews and observations made in the home environment. Three theoretical lenses were used to analyze the data and are reflected in the following study objectives: 1) To describe the work comprising mothers' safeguarding efforts and related contextual factors; 2) To describe the ways that mothers used discursive strategies to explain their children's injury and near injury events; and 3) To explore how mothers' safeguarding efforts reflect gendered relations in the household.

These three theoretical perspectives were used to explore different aspects of mothers' safety efforts. In Chapter 2, the results from using an ethnographic approach are described, while Chapter 3 provides a summary of the results from the use of a discourse analytic perspective to examine mothers' accounts of their children's injury and near-injury events. In Chapter 4, gendered relations related to mothers child safety efforts in the home are explored

using a gender based analysis. Taken together, these three approaches were used to broaden the theoretical perspectives on the issues of preventing children's injuries in the home environment and have done so by introducing new perspectives and drawing on the social research theory from areas including critical feminist sociology, social psychology and critical discourse analysis, as well as feminist theory on gender and motherhood. The chapters that follow provide a summary for each of these three analytic approaches.

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Chapter 2
An Ethnography of Low-Income Mothers' Safeguarding Efforts for Young Children in the Home[1]

Unintentional injuries in the home environment represent a serious public health issue for young children, particularly among those who are poor. While rates of death and hospitalization for unintentional injuries have decreased significantly for children under 14 years in Canada between 1994 and 2003, injuries still remain the leading cause of death for this age group (Safe Kids Canada, 2006). It is estimated that between 50% to 70% of deaths caused by unintentional injuries to children less than five years of age occur in and around the home (Glik, Greaves, Kronenfeld, & Jackson, 1993; Pollock, McGee & Rodriquez, 1996). Associations between poverty and increased rates of childhood injury have been consistently reported in the epidemiological literature (Pomerantz, Dowd & Buncher, 2001; Roberts & Pless, 1995) with poorer children suffering greater numbers and severity of injuries (Laflamme, 1998).

Researchers have identified many factors associated with childhood injury such as those related to characteristics of mothers, fathers, children and the home environment (Matheny, 1987; Irwin, Cataldo, Matheny & Peterson, 1992). Parental efforts have been shown to play an important role in childhood injury prevention particularly with respect to minimizing hazards, and providing developmentally appropriate supervision and teaching (Gielen, Wilson, Faden, Wissow & Harvilchuck, 1995). However, little is known about the mechanisms by which parental efforts are related to injury reductions. Increased knowledge about mothers' efforts is particularly a priority since women act as primary caretakers of children in the majority of Canadian families (Ollenburger & Moore, 1992). Furthermore, since low-income women are often disadvantaged in terms of labour market position, demands of single parenthood and access

[1] A version of this chapter will be submitted for publication. Olsen, L.L., Bottorff, J.L., Raina, P., & Frankish, C.J. An Ethnography of Low-Income Mothers' Safeguarding Efforts for Young Children in the Home.

to affordable childcare (Graham, 1984; Hattery, 2001), improved understanding about how such disadvantages may affect their injury prevention efforts is needed.

The purpose of this study was to address how it is that mothers living in low-income households are able to safeguard their young children on an everyday basis despite broader social and economic influences that may undermine their efforts. This study was aimed at describing the linkages between mothers' experiences and the larger context by way of ethnographic methodology. The focus of the study was on mothers rather than both parents so that a fuller understanding about mothers' efforts as primary caregivers of young children could be developed from their own perspectives (Ollenburger & Moore, 1992). The research questions guiding the study were:

1. What are the everyday experiences of mothers living in low-income households with safeguarding young children and what are major components, efforts and difficulties associated with this work?

2. What are the different ways that mothers' everyday experiences related to child safety are situated in and linked to broader social relations and circumstances?

Background Literature

Injury prevention researchers have utilized mainly cross-sectional, descriptive research designs to examine parental safety practices. However, few of the studies have provided evidence about how parental use of these safety behaviours is linked to injuries reductions among children (Abboud Dal Santo, Goodman, Glik & Jackson, 2004). Recently, however, there have been several longitudinal studies providing some initial evidence that particular parental safety behaviours are associated with reduced levels of injury among children (Kendrick, Watson, Mulvaney & Burton, 2005) and that both parent-based and environmental strategies are associated with a reduction in children's risk of in-home injury (Abboud Dal Santo et al., 2004; Morrongiello, Ondejko & Littlejohn, 2004a). Moreover, Morrongiello, Corbett, McCourt and Johnston (2006b) recently reported finding that mothers' supervision levels, measured using

diary records, were related to children's medically attended injuries from birth. Thus, although there is recent evidence that parental safety behaviours are important for reducing rates of child home injuries, there are still major gaps in understandings of the mechanisms by which safety behaviours prevent injuries and how those behaviours are influenced by contextual factors.

The majority of studies on the kinds of factors that influence safety behaviours have addressed the influence of cognitive or attitudinal factors with few studies addressing interpersonal or community level factors. Some of the contextual variables that have been addressed across quantitative research studies have included social norms (Sellstrom & Bremberg, 1996), income levels, maternal stress, social support and poor housing repair (Glik et al., 1993; Glik, Kronenfeld & Jackson, 1991). Qualitative and mixed-methodology studies have provided more in-depth information about contextual variables including cultural factors (Mull, Agran, Winn & Anderson, 2001) as well as housing conditions and traffic hazards (Roberts, Smith & Bryce, 1995; Sparks, Craven & Worth, 1994). For example, in a U.S. ethnographic study assessing mothers' responses to hazards in and around the home, Mull et al. (2001) provided rich data on how cultural differences affected the safety practices of low-income mothers representing three cultural groups. In another mixed-methodology study, Roberts et al., (1995) used both qualitative and quantitative methods in a case study assessing the safety routines of parents and community-based factors in a deprived urban area in Scotland. This study highlighted the importance of acknowledging the local knowledge held by community members about safety risks as well as the general resourcefulness of parents in devising child safety strategies. The findings of this latter study reinforced the need to develop a better understanding of the contextual factors in the community that impact parent safety efforts.

Furthermore, these qualitative and mixed methodology studies have also provided accounts of parental safety efforts that privileged parents' own views about the scope and experiences of their safety practices. By framing parents' abilities and everyday efforts in a

positive way, the researchers avoided a more negative, deficit-based approach based on researcher-defined outcome measures, which is more commonly used in the injury field. Despite these important developments in the study of parental safety behaviours, important gaps remain regarding the full scope of behaviours that mothers, particularly those living in low-income households, use to keep their children safe on a daily basis, and the need for exploring the linkages between mothers' efforts and contextual factors such as gender-based and income disadvantages that mothers in particular may experience.

The use of theory in injury prevention research is important to both explain the dynamics of parental safety behaviours as well as for planning effective interventions. While a variety of concepts have been used by injury prevention researchers to study parental safety efforts, the conceptual and operational definitions vary widely across studies. Furthermore (and as discussed in Chapter 1), the use of theory across quantitative studies of parental safety has consisted mainly of individual-level theories related to behaviour change, such as the Health Belief Model. There have been only a few conceptual models described in the literature that are specific to child safety risks and that take into account broader levels of influence on behaviour. Examples include the "child-environment transaction" model (Valsiner & Lightfoot, 1987), the "three spheres of thinking" about risk and safety (Sjoberg & Enander, 2004), and, more recently, a model conceptualizing caregiver decisions about injury prevention strategies (Saluja, Brenner, Morrongiello, Haynie, Rivera & Cheng, 2004).

Supervision is one aspect of parental safety behaviour that has been defined and operationalized more fully by several researchers. For example, Morrongiello et al. (2004a) have developed a supervision index that is measured using a subscale of the Parent Supervision Attributes Profile Questionnaire (PSAPQ). This supervision score is based on "typical supervision" reported by parents for 21 activities that children commonly engage in in the home. These same authors have used a participant diary recording method in which supervision

circumstances included children being "in view" or "out of view." In addition, levels of supervision were conceptualized as consisting of nine levels that ranged from level 1 (not supervising) to level 9 (watching constantly).

Saluja et al. (2004) have described how different levels of supervision continuity comprise one of three dimensions of caregiver supervision, which also include caregiver attention and proximity. These same authors suggest a broad conceptual framework that includes supervision and teaching as part of active parental injury prevention strategies that occur in a broader context consisting of risk perceptions as well as social and cultural contexts. While there is empirical evidence to support constant supervision as a more effective strategy than intermittent or no supervision (Morrongiello et al., 2004a), these fuller conceptual models of caregiver supervision have not been tested empirically.

Conceptualizations of supervision have also differentiated between "direct supervision" (parent involved in activity with the child) and "being available" to assist the child as needed (Pollack-Nelson & Drago, 2002), and have been operationalized in a 10-item hazardous situation inventory designed to elicit self-reported, open-ended supervision practices by mothers (Abboud Dal Santo et al., 2004). As Morrongiello et al. (2004a) suggest, there is little agreement among researchers, parents and others regarding what constitutes "adequate" supervision. Saluja et al. (2004), however, suggest that optimal levels of supervision are affected by factors such as the child developmental stage, environmental hazards and child characteristics.

Broad conceptualizations of parental safety efforts have also included *routine practices used by parents* (Sparks et al., 1994), *mothers' responses to hazards* (Mull et al., 2001), *safe keeping activities of parents* (Roberts et al., 1995), and *caregiver decisions about injury prevention strategies* (Saluja et al., 2004). Furthermore, the concept of safeguarding has been used in a qualitative research study on how mothers kept themselves and their children safe from violence in family and community contexts (Mohr, Fantuzzi & Abdul-Kabir, 2001).

Safeguarding has also been used as term referring to an intervention guide for reducing school violence (Dwyer & Osher, 2000). In the area of unintentional injury prevention research, one study from the UK utilized the concept of *safekeeping* to explore mothers' concerns about road safety in relation to their elementary school-aged children (Dixey, 1999) while another study used this concept to examine how parents managed child safety as part of their daily family routines (Roberts, 1991). For the purposes of this study, *safeguarding* was chosen as a central concept because it allowed for a broad frame of reference for the research and the opportunity to examine a wide range of behaviours and concerns related to keeping children safe. The concept of *safeguarding* also helped focus the analysis and interpretation of safety behaviours in a positive frame of reference emphasizing mother' abilities. Furthermore, the term *safeguarding* reflected North American phrasing more so than the term *safekeeping*.

Methods

Study Design

This study utilized an ethnographic methodology that was informed by an institutional ethnographic approach based on the work Dorothy Smith (1987). According to Smith, whose theories are based on a critical, feminist, sociological perspective, *social relations* organize the ways in which peoples' daily activities are coordinated and linked with outside events. This study was, therefore, focused on the production of social phenomena from the perspectives of participants, and examined their interactions, practices and discourses related to injury prevention through extended participation in the field and flexible data gathering approaches. Smith's (1987) approach allowed for the exploration of how social, political and economic processes organize and determine the bases of experience. Guided by Smith's (1987) approach, attention was focused on mothers' daily experiences related to their child safety efforts and how these efforts were related to forces in the broader social and economic context.

Setting and Participant Recruitment

This study was conducted in a community in the Fraser Valley of British Columbia, Canada. The eligibility criteria for participants included: 1) being a resident of the community under study; 2) being a mother and a primary caregiver of a child between the ages of one and five years; 3) living in a low-income household as defined by Statistics Canada Low-Income Cut-Off (LICO) lines and 4) not living on a working farm. (The mother was defined as the primary caregiver if she agreed that she was the main person looking after the child the majority of the time.) LICO's are levels of income "at which families spend 20% more of their pre-tax income on basic needs than the average proportion spent by Canadian families" (Williamson & Reutter, 1999, p. 358). LICO's represent a relative measure of poverty that addresses both material and social deprivation and take into account family and community size. Before-tax LICO values for 2003 were used for this study (Statistics Canada, 2004). The sampling strategy included solicited sampling (Agar, 1980) using a list of parents who had been enrolled in an ongoing study. Since this strategy yielded only enough subjects for the pilot phase, additional recruitment strategies were added including posters at the local health unit and contacting members of three parenting groups in the community. Purposive sampling (Morse, 1994) was also used to recruit more mothers with girls later in the study since initially mostly mothers with boys volunteered.

For the pilot phase, 18 mothers were sent an introductory letter describing the study, followed by telephone contact. They were asked if they were interested in participating and screened for eligibility (see Appendix 6). Six interested women met the study criteria and agreed to participate. The remaining women were recruited when the researcher introduced the study in person to three community groups (to a total of approximately 60 people) from which an additional 11 participants were recruited. In all, 28 separate home visits were made with 6

participants visited once and 11 visited twice. At the first home visit, participants completed the informed consent.

Data Collection

Data collection methods for the study included in-home interviews lasting approximately 60 minutes and separate in-home observation sessions lasting approximately 2 hours. The first interview included introductions, consent procedures (see Appendix 7), asking mothers to complete a demographic form (see Appendix 8), and payment of an honorarium. Home observations visits included: a tour of the home, completion of the safety checklist by the researcher as well as general discussion of safety issues arising during completion of the checklist. Pertinent discussions during the home observation sessions were audio taped whenever possible. During observation visits, mothers, their children and other immediate family members when present were asked to carry on with their everyday activities while the researcher was in their home. Observations were made of: the interior and exterior environment of each home, mother-child interactions, and any child-safety related events taking place in the home. Copies of checklists were left with mothers at the end of the visit and observations of potentially unsafe conditions were noted and shared with the mother at the end of the visit.

Fieldnotes were written following both the home interviews and observation visits and included both descriptive and analytic notes. Descriptive notes provided a written record of the home observations and of events and interactions that took place during the visit. Analytic notes were more conceptual and included reflections on how successful the questions were for eliciting information. These notes were used to develop ideas for modifications to the interview questions and research strategies. Intensive note taking was not possible during the interviews because it was felt to be intrusive. Instead, jottings were made during visits, followed by writing of field notes as soon as possible following the visit. Interview audiotapes were transcribed verbatim and the transcripts were checked against the audiotapes for accuracy.

Data collection forms used during the interview visits included the demographic form (see Appendix 8), and an interview guide initially consisting of 12 questions and prompts (see Appendix 9). Interviews were semi-structured and addressed the following issues: safety concerns and strategies, injury experiences, care by others, use of safety information and resources, as well as issues that mothers felt affected their safety efforts. The questions were derived using Dorothy Smith's (1999) approach for developing inquiry about women's everyday worlds, injury prevention theory addressing factors related to host, agent and environment, and ecological perspectives on health promotion addressing how health-related factors can operate at intrapersonal, interpersonal and community levels. The semi-structured interview questions were refined as the analysis progressed. In a final set of four validation interviews, additional questions were developed to assess mothers' opinions on themes emerging from the study. The home observation guide included 22 items addressing main injury causes for young children: burns, scalds, poisoning, falls, choking, cuts, drowning and traffic. Items were selected from two existing home safety assessment guides (Watson, Kendrick & Coupland, 2003; Bablouzian, Freedman, Wolski & Fried, 1997).

Campbell & Gregor (2002) outline how textual data are used in institutional ethnography to reveal extra-local ruling practices. The concept of "ruling" is used by Smith (1987) to explain "how socially-organized exercise of power shapes people's actions and their lives" (Campbell & Gregor, 2002, p. 32) and that "relations of ruling" identifies a complex of organized practices such as those of government, law, educational institutions as well as related text-based discourses. These modes of ruling are "extra-local" in that they are "constituted externally to particular individuals and their personal and familial relationships" (Smith, 1987, p. 3). While Smith sees texts as forming an important part of the social relations, textual information related to child home safety are diffuse across many sources and not clearly linked to any one specific set of institutional practices. In this study the identification of important textual influences

potentially shaping mothers' safeguarding efforts were made indirectly through interview and observational data.

Data Analysis

The data analysis process involved coding the interview and observational data to produce a generous account of mothers' safeguarding work and experiences. NVivo 2 software was used to organize code and analyze data. Codes were initially formed to reflect the research questions and were revised and reorganized as the study progressed (Miles & Huberman, 1994). The analysis proceeded in four stages. The first stage involved analysis of six pilot interviews and this resulted in the first set of codes and themes from which initial findings were summarized. The second stage incorporated data from seven additional interviews and resulted in a set of 40 NVivo codes that helped to organize the major categories relating to mothers' safeguarding work and contextual factors. In the third stage, major themes were identified that crosscut these linkages and helped to organize discussion of the different ways that institutional forces shaped and affected safeguarding. These themes were further validated and explored in four final interviews. The final phase involved further consolidation of the codes and emerging themes. Placing memos directly into the data file during the coding process also assisted with the identification of linkages between safeguarding work and the broader social relations in which they were embedded. The following sensitizing questions were used to facilitate this memo writing process (Campbell & Gregor, 2002; Hammersley & Atkinson, 1983):

1. What kinds of ruling relations are implicated in mothers' accounts of safeguarding work?
2. What different levels of ruling practices are implicated?
3. What kinds of assumptions are found in the mothers' talk about child safety that obscures their work or reflects broader societal discourses of mothering and child safety?
4. What meaning laden terms and inconsistencies were noted in the data?

These questions allowed a moving back and forth in the analysis to help identify the kinds of ruling ideas and practices that were implicated in women's safeguarding experiences (Campbell & Gregor, 2002). Furthermore, strategies for verification were implemented in the research

process that, according to Meadows and Morse (2001), contributes to internal validity of a project. These included: situating the project within current literature, bracketing known information during the study, following the study design consistently during sampling and analysis, and sampling to theoretical saturation. In addition, strategies used to validate emerging findings included the use of multiple data collection methods, member checking with study participants and documentation through an audit trail. This included written records of participant recruitment, data collection procedures, documentation of the different stages of analysis, and graphical records.

Approval for the study was obtained from the UBC Behavioural Research and Ethics Board and from the health authority ethics committee. Mothers were informed that if information arose during data collection that led the researcher to suspect that a child in the family was being abused, then the researcher was legally obligated to report that to the child welfare authorities. All participants provided signed consent. If the researcher noted significant hazards or unsafe behaviours during data collection, these were pointed out to the mother at the end of the visit and she was provided with appropriate resource information.

Findings

A brief description of the community setting in which the study took place and the characteristics of participants is provided to contextualize the findings of the study. This is followed by presentation of findings about the nature and components of the safeguarding work. Following this, the different ways that mothers' safeguarding work was found to be situated in broader physical and social contexts reflecting economic, gender-based and institutional factors are presented.

Setting and Participants

This study took place in a community of approximately 70,000 residents that was comprised of urban, suburban and rural neighbourhoods. The major employers in the community included the public sector and agriculture. A total of 17 mothers from the community participated in the study. Mothers ranged in age from 19 to 37 years of age, with a mean age of 27 years. Their children ranged in age from 16 months to 5 years. In total, there were 21 children ages 1-5 years, who were living in the home on a continual basis, including 13 boys and 8 girls. The number of children (of all ages) living in the home ranged from one to seven. Seven of women identified themselves as Canadian, while the remaining were divided between First Nations (n=4), British/European (n=2) and other (n=4). Eleven mothers were married or living common law and four were currently employed. Six of the mothers reported a yearly pre-tax family income of less than $10,000, another five reported income between $10,000 and $20,000 and the remaining six reported income between $20,000 and $40,000.

Educational levels were nearly equally divided among mothers who reported having high school education or less (n=9) and those reporting some higher education (n=8). Mothers lived in a variety of housing types that included single family homes, mobile homes, townhouse complexes and apartment buildings and nearly all were renting their homes (n=15). The condition of the homes ranged from well-maintained and organized homes to those that were in states of major disrepair and disorganization. Five of the 17 mothers reported that one of their children had suffered an injury requiring medical attention. These injuries included finger cuts, falling and hitting head or face, and a dislocated elbow.

Mothers' Descriptions of Risk Concerns and Safeguarding Efforts

During the interviews, mothers were asked about their top concerns or worries related to how their children might get hurt in and around the home as well as the things that they did during a typical day to keep their children safe. They tended to describe their concerns and

activities within the context of childcare and household routines, and in relation to the abilities and interests of their children. For example, one mother described her concerns about her child who liked to run off towards the road:

> He's definitely quick that's for sure. And then when he like books it towards the road and you start running after him he goes even faster and so it's scary because you never know if there's a car coming. [20-year-old mother with 21-month-old boy]

Mothers often described their efforts to protect their children from harm in the form of narrative reports of typical problematic or hazardous situations that arose during day to day activities. A number of mothers believed it was important to consider both the physical and the emotional aspects of their children's safety. Children's psychological or emotional safety included their safety from threats such as bullying and other's negative social behaviours as well as feeling confident and secure.

According to Smith's (1987) social relations theory, work can be broadly conceptualized as "what people do that requires some effort, that they mean to do, and that involves some acquired competence" (p.165). With this expanded view, there are aspects of life that, although unpaid, are still seen as essential to the economy, and thus considered "work." While mothers in this study did not typically refer to their own efforts using the term "work," their descriptions of their daily safety-related activities were consistent with the idea that work includes activities that involve time and the application of knowledge and judgment (Campbell & Gregor, 2002). The term "safeguarding" was introduced by the researcher during the interviews and was used interchangeably with the phrase "keeping your child safe." Mothers repeated both terms during the interviews providing an indication that these terms were seen as appropriate for describing their daily safety-related efforts.

Hidden Nature of Safeguarding Work

One important aspect of the safeguarding work that emerged from interview data was the degree to which women took their own efforts for granted, characterizing these efforts as

"common sense." For example, a grandmother and mother who jointly cared for a 2-year-old child pointed out some of the different ways that they took action in their home to reduce hazards, but characterized these as automatic actions that were not given very much thought:

> Grandmother: Blind cords or anything...not leaving things hanging over, on counters and things that kids can pull at. Handles on your stove, making sure they're in. Just little things, to think of them all at once when you're not...there's things that you automatically do...
> Mother: You don't even think about anymore.
> [Grandmother and mother co-parenting 2-year-old boy].

This trivialization by mothers' of their own safety efforts reinforces renderings of women's unpaid labour, including childcare, as invisible and seen as "non-work" (Pierce, 2000). This downplaying of the effort involved contrasted sharply with the ways that women in the study emphasized their commitment to "constant vigilance" to protect their children and the sacrifices they were willing to make to do this.

> Constant vigilance. Constant vigilance. That's all that that is. It means that if the kids are up, I'm up. I don't go to bed when they're up. I don't have a nap at home when my children are awake. I'm always watching them. Yes, I always feel like I'm on guard, I'm always watching for anything that could happen. [33-year-old mother with partner, 6 children[2]]

The significant efforts mothers made to provide constant vigilance were observed frequently during the home interviews. Mothers were observed to engage in multi-tasking efforts in which they monitored children's activities at the same time as they did other things such as folding laundry as well as participating in the interviews. One mother described how providing constant monitoring was at times very difficult, such as when she needed to make multiple trips up and down a long flight of stairs carrying groceries with one arm and her 17-month old son with the other arm. She did this to avoid leaving her child alone in the apartment or outside in the car.

Contradictions between the minimization of safeguarding activities and the actual effort required mirrors contradictions inherent in broader social constructions of mothering. Mothering

[2] The number of children has been slightly altered to protect the participant's anonymity.

is often portrayed as "priceless," yet the activities involved are deemed non-work and their contributions to society undervalued. Grace (1998) argues that the social construction of mothering and the devaluing of mothers' work are closely linked to the economic conditions and oppression of women caring for young children. Thus, the devaluing of women's domestic work, of which safeguarding is a part, may potentially impact children's injuries by contributing to inadequate recognition of the scope and complexity of mothers' safety-related efforts. As a result, effective safeguarding strategies used by mothers may go unrecognized and unsupported, and the nature of barriers to effective safeguarding may remain obscured. By more fully understanding mothers' efforts and the related barriers, more effective prevention strategies can be developed to acknowledge the "real time" demands of the work and that can address barriers in a realistic way.

Components of Mothers' Safeguarding Work

The components of the safeguarding work fell into four main categories (see Figure 2.1). These included background cognitive work consisting of risk appraisal and emotional work as well as more interactive types of safeguarding work that were directed at the child, at others in the social environment and at various aspects of the physical environment.

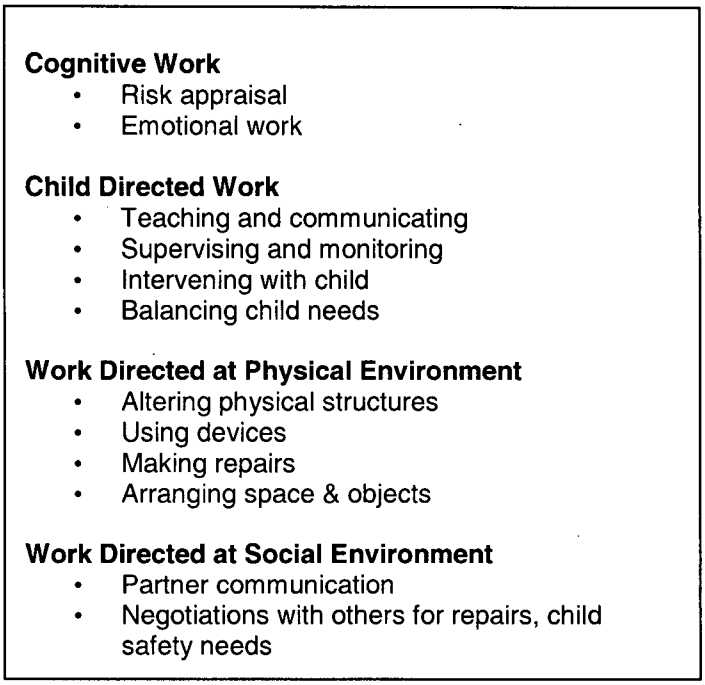

Figure 2.1 Components of mothers' safeguarding work.

Cognitive Work

Risk appraisal work. This type of work reflected mothers' background thinking and decision making regarding identifying risks to their children's safety. Table 2.1 shows the safety concerns that were mentioned most frequently by mothers.

Table 2.1

Mothers' Top Safety Concerns in and Around the Home (N=17)

Safety concern	Frequency mentioned
Falls	14
Traffic	12
Burns	9
Abduction	5
Choking	5

The risk appraisal process also involved decisions by mothers on balancing children's needs for new learning with the potential for getting hurt, and many mothers emphasized how consideration of their children's needs for play and learning independent activity factored into their decision making. Mothers also described the demanding nature of this risk appraisal work because they needed to continually think about risks to their child for their current state of development, and to also consider how emerging abilities might present new risks.

Emotional work. Mothers also spoke of the need to manage emotions that accompanied their safeguarding efforts and risk decision making. These emotional aspects included managing fears, worries, feelings of paranoia, uncertainty, and feelings of being constantly "on guard" and "stressed." One 36-year-old, single mother described her feelings as a "cycle of worry" in which her sense of being potentially judged by others regarding her safeguarding abilities increased her doubts and anxieties and contributed to her being "hypervigilant." She described how her children (aged 5 and 7) would then react to her more "agitated state" by acting less manageably which she then found further increased her feelings of being judged.

Hochschild (1979) describes how "emotion work" is used by people to manage and shape their emotions. Evidence of this type of work was found in women's descriptions of the efforts

they made to manage feelings of uncertainty, stress and a sense of being judged. Women also described how they received safety information from a large variety of sources including media, government and health organizations as well as family and friends. While several women reported how they filtered the safety and risk information they received and paid attention only to what they believed was applicable to their child and situation, others reported greater feelings of uncertainty and stress related to their safeguarding efforts. These feelings coupled with a sense of being judged or being "watched" due to their low-income status added to the emotional work that mothers engaged in so that they could safeguard their children with a certain level of confidence in their own efforts.

Child Directed Safeguarding Work

This component of mothers' safeguarding work was child-focused and was comprised of four areas: teaching and communicating, supervising and monitoring, intervening with the child and balancing child needs.

Teaching and communicating. Overall, the main teaching and communicating safeguarding work of the mothers included: setting safety rules, enforcing and providing rationales for these rules, developing communication strategies suited to the children's developmental abilities, and using minor injury events as teaching opportunities. A number of the mothers described how *teaching* was the most important strategy they used to keep a child away from dangerous situations. Teaching included using *verbal explanations* to provide children with rationales for safety rules. A 31-year-old, married mother of four children described how she increasingly relied on explanations as her children developed. She reasoned that with a child between 13 and 18 months of age, she could "rationalize more", and depend on her child's ability to understand what it meant to get hurt. Providing rationales for safety rules was also cited as important by one 29-year-old mother of a 16-month-old boy who explained that

she didn't "believe in just saying 'no' because I said so" but that it was important to provide reasons that children could understand:

> I'm big on [saying] "no, because if you do it, you will get hurt" or "if you do this, this will happen". You always have to have a reason....It's important I think, to answer their [children's] questions and let them know why you're saying things....If you just keep saying "no, because I said so" then they're just gonna say "whatever, I'm gonna go do it anyways" because there was no reason why. But if you say, "no, because you might get hit by a car if you're standing on the road" [then the child thinks] "oh, well maybe I won't go on the road because I might get hit by a car." [29-year-old mother with partner, 1 child].

Mothers also emphasized the importance of not only tailoring teaching to their child's age, but also to their changing developmental needs and personality characteristics.

Another aspect of teaching work was the idea of helping children learn about safety through the experience of minor injury events. Mothers reasoned that letting children experience minor consequences from a risky behaviour and learning what that "feels like" held advantages over children just hearing "no." For example, a mother of a 2-year-old girl described how letting her daughter access serious hazards was not acceptable. However, letting her child experience a minor fall on the stairs that might "hurt a little" was acceptable if it helped her to learn about cause and effect, and develop new skills:

> If it hurts a little bit...if you can see that probably she'll see a cause and effect thing. You're not going to let her try to get into cleaners or anything like that. But, like things with stairs you know, just that one little (stair)...she just skipped the bottom one is what happened, so she fell and she [said] "ow...hurt."
> [31-year-old mother with partner, 4 children].

The acceptability of injury risks were related to the degree and nature of the threat that mothers perceived as well as their estimation of their child's ability to handle the risk. One mother, for example, was not concerned about her son's jumping from furniture because she considered him to be a "tough kid."

Supervising and monitoring. For the majority of the mothers, supervision work was a key ingredient in and major part of their safeguarding work. For those with younger toddlers, it was seen as an all-consuming activity, and was reflected in many absolute statements such as, "I basically just follow him around all day" and "Inside, he's never around the house by himself." Some mothers, however, did feel comfortable leaving children as young as 1 ½ to 2 ½ years alone in a room that they considered safe with intermittent checking.

Many mothers described the need for heightened vigilance and intense supervision when their child was outside, particularly for toddlers who were at increased risk of escaping into out of bound areas. One 20-year-old mother of a 21-month-old boy, described her yard as "great", but explained that she needed to watch her son "like a hawk" because of road proximity and a lack of fences. Similarly, another mother described how she consistently and closely accompanied her two children outside, following "them around like a hawk."

Intervening with the child. This component of safeguarding work included the interactive efforts that mothers made with their children to avert danger or to foster safe behaviour. These actions included discipline to enforce breached safety rules, intervening with the child physically to avert potential danger and managing injury events when they occurred.

Balancing child needs. A final component of the child-focused safeguarding work related to how mothers balanced the needs for protecting children from safety risks with their needs for learning and play. For some mothers, these needs were seen as oppositional concepts while others emphasized how it was feasible for them to provide opportunities for play and new learning while doing so "safely."

Overall, these findings highlight the complex nature of mothers' child-focused safeguarding work and how much of this work was closely embedded with other childcare tasks such as physical care, discipline, socialization, as well as providing opportunities for play.

Safeguarding Work Directed at the Physical and Social Environments

Mothers' safeguarding work also included efforts that were directed at both the physical and social environments. Many of the mothers reported how they worked to modify the physical environment of their homes to create safer spaces for their children and these efforts included altering physical structures, using devices, making repairs, and arranging space and objects in the home. Furthermore, safety efforts directed at the social environment included communicating with partners about children's safety issues, and negotiating with others for repairs and other child safety needs. One mother, for example, explained how she needed to teach new caregivers about special concerns regarding her 2-year-old son's choking risks.

Contextual Factors Affecting Safeguarding Work

There were many factors related to both the physical and social environment that were identified by mothers as affecting their safeguarding efforts. In the next section, key themes emerging from the study related to these factors are highlighted. Furthermore, different ways that social relations of power appear to be implicated in mothers' safeguarding efforts are examined across these themes.

Contextual Factors in the Physical Environment

In relation to the physical environment, participants described a variety of factors that were linked to their efforts to keep their children safe including: the design and quality of the indoor living space, housing maintenance and repair needs, stability of housing, the availability of safe play space and the presence of traffic hazards.

Quality and design of indoor living space. The design, quality and structure of the indoor living space were linked to mothers' abilities to supervise children, use safety devices, prevent children's access to hazards and negotiate with others to make the necessary modifications to the home. Some of the positive design qualities of the indoor space identified by mothers in relation to their safeguarding work included having an open layout, and having a small home or a one-

level home. These housing features were seen as beneficial in that they assisted with visual and auditory monitoring of children and their activities. One mother described how her one level, two-bedroom apartment made monitoring her child easier:

> With the inside, it's all one level and ...you can hear anything that's going on so when it gets quiet you know he's into something and you can go look. [27-year-old mother with partner and 17-month-old boy].

Stairs were often a main safety concern for mothers whose homes had them, particularly when they were steep. Mothers who had stairs in their homes described the additional efforts they made to prevent children's access, for example, by using stair gates, door locks or more carefully monitoring children. For some, however, having stairs was considered a positive factor that provided opportunities for safety teaching.

Other problematic indoor issues included difficulties with the use of safety devices that often did not fit or work in older homes. Another often-cited indoor problem was a difficulty keeping children out of the kitchen. While some mothers used a gate for this, others found that door spans were too wide for any gate. One solution mentioned by several participants included distraction of the child with television so that they could work in the kitchen. To reduce child access to hazards, mothers also reported different ways they used makeshift modifications. These included using elastics and plastic bags to tie cupboard handles together or using tape to keep refrigerator doors shut or electrical sockets covered. Participants also described how having minimal storage space made it difficult to safely store hazardous products. These storage problems contributed to some mothers' perceived needs to be constantly vigilant of the child's whereabouts and activities as well as contributing to continual worries that the child would "get into something."

Issues of inadequate storage reflected a lack of affordable and safe housing options for low-income women. Housing deficiencies also led to the use of potentially unsafe, makeshift safety measures. Some mothers, particularly those living on one income, described how their

basic needs for food and rent held priority and that safety devices and proper home repairs were very difficult to afford.

Housing maintenance and repair. Eight of the mothers in the study described how they relied on other people to take care of house repair and maintenance tasks. Some described difficulties with landlords who were unresponsive to written or verbal requests for repairs while others experienced a lack of assistance from family or partners.

The social relations affecting how mothers negotiated with others for household repairs reflected for some, a lack of authority over their domestic space. If women's work is socially devalued, then the authority that they hold over the organization and alteration of the space in which they conduct their work may not be highly respected by partners, property owners or others who hold greater power. Furthermore, women's socialization into gendered roles may hinder their competence with house maintenance and repair tasks, thus increasing their dependence on others for assistance. Living on low incomes further limits the resources that women have to hire outside help or to do repair work on their own.

Stability of housing. Researchers have documented that it is more difficult for low-income families, and women with children, in particular, to acquire low-cost, stable housing (Rude & Thompson, 2001). For a number of the women in this study, moving and its associated financial burdens stretched their already thin resources and placed added stress on the families. Five of the women in this study had either recently moved or were planning a move in the near future. In three of the homes, packed boxes and household items were piled up and within reach of young toddlers. These materials increased clutter and posed extra hazards for young children. This impacted the mothers' safeguarding by increasing the need for extra monitoring of the child's activities, and direct intervention when the child accessed things from the boxes. The need for frequent moves thus directly affected mothers' safeguarding work by disrupting their daily routines and creating additional physical hazards in the home.

Availability of play space. In many of the homes visited, there was little indoor play space available for children and mothers also identified a lack of safe, enclosed and easily accessible outdoor play space. This affected the degree to which they were able to foster play opportunities for their children:

> The biggest problem with my income level and Paul is that there's no place for him to play....I would like to have a house with a backyard where it's enclosed where he can go all out. As it stands now, if he's outside, I have to be outside because he's always on the road or he's ppphsshhtt gone....So, I have to take him out a lot to the parks and stuff, so he has the room to run around and be crazy....That would be the worst thing about living here I think. [29-year-old mother with partner, 16-month-old boy].

In a study of pedestrian injuries (Mueller, Rivara, Shyh-Mine & Weiss, 1990), researchers reported that children living in homes with no play area had an injury risk more than fives times greater than those children whose homes had a play area (odds ratio=5.3 (C.I. 2.6-11.0)). The quality of housing and access to safe play place for children reflects how municipal level policies regulating the priorities for development and traffic planning may not take into account the safety concerns faced by low-income mothers with young children.

Traffic hazards. Most of the mothers cited high levels of concern about traffic hazards. Observations revealed that six of the families' homes were situated along busy urban and rural streets with little space and/or barriers between the home and the road. In one of these homes, the front door of the home was separated from a busy road exiting directly off a major highway by only a few yards and a sparse hedge. Another seven families lived in apartment or townhouse complexes where the exit doors led straight into parking areas or local roadways. In one case, the apartment door opened directly from the living room onto a parking lot with virtually no space between. This mother was unremitting in her concern that her 17-month-old boy would dart out an open door. Another four families lived on quieter suburban streets with greater distances to the road while only one family home was situated well away from the road.

These traffic related concerns are validated by research that has shown pedestrian injuries to children to be over three times greater when children live in homes with no fencing between play and driving areas or when driveways are shared (Roberts, Norton, & Jackson, 1995). Outdoor traffic hazards are exacerbated by municipal policies that favour automobile traffic over pedestrian safety and housing development that maximizes built areas. High costs associated with building fences also present a financial barrier for tenants and owners.

Contextual Factors in the Social Environment

The analysis revealed several ways that aspects of the social environment both within and beyond the family context affected mothers' safeguarding experiences. Intra-family contextual factors included family health issues and sibling interactions, while extra-family contextual factors included relationships with neighbours, care by others and trust in community supports for child safety. These factors will be described along with ideas about how larger power relations may be implicated in the ways that these factors affect safeguarding work.

Family health issues. Health issues at the family level played an important role in mothers' safeguarding work. Participants reported health-related issues that they or their partners were experiencing such as: decreased mobility due to back and leg problems, eating disorders, anxiety disorders, Attention Deficit and Hyperactivity Disorder, Fetal Alcohol Syndrome, carpal tunnel syndrome, diabetes, and partial blindness. In addition, four participants were pregnant. For some of the participants, these health issues affected the effectiveness of their safeguarding efforts. For example, several mothers with decreased mobility described the difficulties they had chasing their toddlers if they ran off. One mother of two children, ages four and seven described a period of time when she had been immobile due to a foot problem and that this had affected her ability to monitor and intervene with her child:

> The steps were a big thing when he was two years old and he was taking off and going down the steps. When my foot was broken and I couldn't stop him....It was my scariest time because L [older child] had to watch B [younger child], she was only four and she wasn't that good. So, my mom would come in because I couldn't watch them. [27-year-old mother, single, two children].

Another mother described how her partner had poorly controlled diabetes and was prone to mood fluctuations and that this made her reluctant to leave her youngest child under his supervision. Another mother, who had been prescribed a new medication for a mental health disorder was reluctant to begin this medication in case she slept so heavily that she would be unable to wake up to supervise her two children. Smoking among mothers and/or partners also presented additional challenges in some households because parents attempted to protect their child from second hand smoke while at the same time maintaining adequate supervision. For example, one set of parents went out of the apartment to smoke, each time opening the door and creating an escape risk for their toddler.

Children's health problems, which included hearing difficulties, deafness, asthma, speech, sensory and motor delays also presented safeguarding challenges. Mothers described adapting to these health issues through more careful assessment of safety risks, additional monitoring of children and needing to teach other caregivers about special risks. One mother, for example, had a 2-year-old boy with swallowing difficulties and a tendency to choke. This mother described the extra care she needed to take when preparing the child's food and also how she needed to carefully instruct other caregivers about these issues. Family members' health problems, therefore, affected mothers' safeguarding work in a variety of ways.

Sibling interactions. Many of the families had additional children outside of the study age groups and in these families safeguarding tasks were also more complex due to differing safety concerns for children of different ages. In three families, older siblings also had special needs, and this resulted in extra demands on mothers by increasing the need for vigilance and for monitoring sibling interactions. For example, one mother of a 17-month old girl and a seven

year old boy with special needs described how it was difficult to monitor both children when they went outdoors:

> The other day...I had put a blanket out and I had taken both out there, and well, she went one way and he ran around the other way...so I just decided, no you guys aren't going out at the same time. [36-year-old mother, single, five children].

In another home, an older boy of 11 years with special needs wished to take his 26-month-old nephew outside, but the mother did not let him do that alone, reasoning that he lacked the motor skills and judgment necessary to keep the younger child away from traffic dangers. However, in many families, mothers described how older children helped with supervising younger siblings and this assistance was also observed during home visits.

Additional challenges, such as caring for children with special needs, added to the complexity of the safeguarding work, highlighting the unrelenting demands of this work and reflecting societal assumptions that women can do this work without respite. Although several women spoke of having respite services available, these only partially relieved them of their childcare burdens. This finding is consistent Grace's (1998) description of how mothers often face complete physical exhaustion in trying to provide for both the material and daily care needs of young children and how this often takes place with no breaks from their responsibilities.

There were also connections between the family and social networks beyond the family that constituted important contextual variables for mothers' safeguarding work. Key themes included *relationships with neighbours* and *childcare by others* outside the immediate family.

Relationships with neighbours. These kinds of relationships played an important role in mothers' perceptions of living in a safe environment. Some mothers reported how their sense of their neighbourhood as a safe place for their children included having neighbours who were at home during the day (e.g., retired people or other families with young children). Neighbour relationships, however, sometimes made safeguarding work more difficult. For example, the

need for *sharing space* affected one mother's ability to use a safety gate on shared stairs, while another mother spoke of needing to closely monitor shared laundry space for hazards such as drug-related materials left by other tenants. These examples illustrate how low-income women may face difficulties in securing affordable housing that is safe for children and how their options may be limited to living in the less desirable areas of the community.

Informants also described experiences of conflict and disagreements with neighbours that made safeguarding work more difficult. In addition, several mothers described how neighbours or other social contacts had made reports about them to child welfare officials for a variety of reasons. They described how incidents of *reporting on others* could be used as a tactic "to hurt" them and several noted that this was a common occurrence in their community. Such fears of *being reported on* were linked to a mistrust of others and some mothers described their reluctance to form close relationships with other mothers as a result. Fears of *being reported on* by others may reflect legitimate concerns by poor mothers regarding the potential involvement of child welfare authorities. In a critical analysis of the child welfare system, Swift (1995) argues that the organization of the system and the practices of the workers, serves to screen people fitting certain social categories through its characterization and treatment of child neglect and thus poor and marginalized women face greater scrutiny and coercion than do members of the middle class.

Care by others. Trusted sources of help for childcare included parents, grandparents, other relatives including older children in the family, community service organizations, and to a lesser extent, various forms of daycare. One mother of a toddler who was planning to move closer to her family described how she felt that her child would be safe in their care:

> Like, my family's really close and you know that we kind of watch out for each other, we need that. That's part of the reason we're going home. And it's just because we need that connection and that, you know, at least then I can leave him for a couple of hours and I'll feel safe about it, because I trust my family and I know that they're gonna watch out for him – make sure nothing happens. [29-year-old mother with partner, 16-month-old boy].

Mothers in the study also expressed a sense of mistrust in relation to child care provided by non-family members. Some described negative past experiences while others spoke of a more general lack of comfort leaving their children with people they didn't know well. This mistrust of others coupled with fewer daycare options available for low-income women may foster isolation and add to the unremitting nature of their safeguarding work.

Trust in community supports. Mothers generally described how many supports existed in their community to help mothers in their safeguarding work. Public health agencies were generally described as supportive agencies that mothers reported using to access child safety information. Local, community-based agencies that assisted mothers with parenting issues and provided direct and tangible help were described as supportive by many mothers. They described how many services for families with young children were available in the community and how these services provided them with much-needed breaks, educational resources and opportunities for social interaction in a supportive environment. However, there were several participants who spoke of having fears about seeking care from health care providers when their children did suffer an injury due to worry about the injury being suspected as potentially abuse-related. Descriptions of fears and feelings of mistrust were described more frequently in relation to health care providers and social service agencies. The power held by both health care and social service institutions to potentially investigate mothers' safety behaviours are thus implicated in the ways that mothers seek medical assistance when injuries do occur. These findings point to a need for increased understandings about how community and social agencies can best support mothers' efforts to keep children safe in a manner that engenders trust.

Discussion

This study provides a unique and holistic overview of low-income mothers' efforts to keep young children safe in the home environment and gives voice to women's own perspectives. This study also identifies safeguarding as a valuable concept for understanding mothers' child safety work efforts and provides a description of how this work is linked to physical and social contextual factors and is embedded within larger ruling relations.

The concept of *safeguarding* was well-suited to describe the safety efforts of mothers since it provided a broad frame of reference for exploration of mothers' safety-related concerns and efforts. The concept of *safeguarding* allowed for the more hidden aspects of these efforts to emerge such as teaching, balancing safety with children's other needs as well as the cognitive and emotional aspects of the work and to recognize how safety work was closely embedded with other daily tasks related to child care. Conceptualizing safeguarding work that is largely unrecognized also serves to highlight inequities in domestic divisions of labour and the lack of recognition by society for women who are held largely responsible for these types of time-consuming and undervalued activities. Furthermore, the concept of safeguarding provided a positive frame for recognizing mothers' safety efforts and avoided a focus on shortcomings.

Findings about the different components of low-income mothers' safeguarding work add to previous research findings on parental safety efforts. Roberts, Smith & Bryce (1995) examined child safety issues among parents in a disadvantaged community in Scotland. Although their study was broad in focus (including the views of mother and fathers and addressing child safety issues for children up to 14 years) similar categories of parental safekeeping activities were identified. These included using vigilance, making physical changes to the environment, preventing near accidents, preventing minor accidents, using informal measures to deal with traffic and to create safe play spaces. Findings from the current study support and expand upon these findings, particular with respect to how mothers' safeguarding

efforts also included cognitive work, use of teaching strategies, and work directed at the social environment. Furthermore, the current findings more finely delineate those aspects of safeguarding work aimed at the physical environment.

The study findings highlighted the hidden nature of mothers' safeguarding work and this can be seen to share characteristics with other types of domestic work for which women are largely held responsible. Other researchers have identified similar findings in relation to other types of domestic work. For example, research by Devault (1991) on women's work in feeding the family showed that despite the ubiquitous nature of the activities, there is inadequate language to describe their nature and complexity. The same argument can be applied to safeguarding in that protecting young children from harm is a universal activity; however, the specific components of the daily efforts involved have not been well elucidated. The study findings add to this understanding, but need to be further investigated with mothers in others settings. Additional research is needed to further explore how the gendered nature of women's roles and responsibilities in the home affect safeguarding efforts.

Mothers in this study reported a heavy reliance on and early use of child-based strategies such as teaching. Morrongiello et al. (2004a) report findings from their longitudinal study of mothers' use of prevention strategies in the home showing that an emphasis on the use child-based strategies such as teaching may increase the risks of injury to toddlers and they also suggest that child based teaching may be relied upon at too early an age by parents. Further study is needed on how women-centered approaches can be used to enhance mothers' safeguarding skills and their knowledge of child development and how strategies can build upon mothers' abilities to weave safety teaching into the fabric of daily child care activities. Further study of how teaching strategies used by mothers are linked to young children's understandings of safety risks is another potential area for additional research.

Roberts et al. (1995) highlighted factors related to the physical environment that parents in their study viewed as risky. These factors included: unsafe windows, doors, verandas, or badly designed kitchens, as well as unsafe roads, railway lines, inadequate play areas and needles left by drug users. The findings of this study revealed similar concerns related to the physical environment and point to the need for research on how mothers can be best helped to use effective, low-cost strategies without placing children at increased risk, as well as how families can be best supported to make needed home repairs.

The analysis also revealed ways that social contextual factors were linked with mothers safeguarding efforts at family, neighbourhood and community levels. At the family level, key themes included family health issues and sibling interactions that were all factors which impacted mothers' safeguarding work. Roberts et al. (1995) reported that significant numbers of children in their study had health problems and suggested that this could impact their vulnerability to injuries. The current study findings expanded upon these ideas by describing some of the ways that mothers' safeguarding was directly affected by a child's or sibling's health issues. This is an important area for further research since many gaps in knowledge exist.

The relationship between sibling interactions and child injuries is another area that has received little research attention. In a recent study, Morrongiello, MacIsaac and Klemencic (2007) reported finding that the amount of time that younger children spent supervised by an older sibling was related to the injury history of the supervised child. The issue of supervision by older siblings thus has key importance for low-income families who may often not have access to affordable child care.

Many mothers in this study reported having mutually beneficial relationships with family. However, their relationships with neighbours and other social contacts were often described as mistrustful. Many of the women who experienced mistrust also described their concerns about the potential involvement of social services agencies. Thus, the ruling relations exerted by these

social institutions were found to affect and shape women's experiences of child safeguarding work as well as their engagement in social relationships. These findings contrast with those of Roberts et al. (1995) who reported how parents used safety strategies that "involved the reciprocal giving and receiving of favours with family and friends" (p. 64). Social capital theory may hold particular relevance for developing a better understanding of the social dynamics influencing mothers' safeguarding work since trust and reciprocity are viewed as important components of social capital (Kreuter & Lezin, 2002). Thus, using social capital theory to further explore mothers' safeguarding work may hold promise for future research.

While this one study does not provide the evidence needed to make specific policy recommendations, some general policy implications can be suggested. Firstly, with respect to the finding that the nature of mothers' safeguarding work was closely linked to the broader realm of women's domestic work suggests that it is important to consider how policy changes that affect women's domestic work overall may also affect how well they are able to safeguard their children in the home. Secondly, the study findings on how poor quality and unstable housing affects safeguarding work points to the need for increasing the availability of safe, low-cost housing for low-income families with children. Difficulties with securing adequate housing have been exacerbated by reduced federal support for social housing initiatives in Canada since the 1990's (Rude & Thompson, 2001) and by the high costs of housing in the local market. Thus, new initiatives for low-cost housing need further support.

Finally, study findings regarding the different ways that hazards in the outdoor physical environment can compromise mothers' safeguarding work suggest the importance of municipal policies support the needs of mothers with young children by facilitating access to safe outdoor play environments, providing safe routes for pedestrians and use of traffic calming measures.

General directions for intervention design can be suggested on the basis of study findings. Firstly, it is important for practitioners who design prevention strategies to acknowledge the

complexity of many mothers' lives that may involve the simultaneous juggling of safety efforts with other childcare and household tasks. It may, thus, be important to develop messages that acknowledge how mothers incorporate safeguarding behaviours into other everyday tasks rather than treating safety-related behaviours in isolation. Furthermore, practitioners developing prevention strategies should consider both income and gender-related constraints on safety efforts as well as how factors at multiple levels may present barriers to effective safeguarding. Thus, the use of an ecologically-based framework is important for both planning and evaluating injury prevention programs.

The findings of this study need to be considered in light of several possible limitations. Study participants included mothers who had taken part in a separate child safety study and who had participated in community parent support programs. Thus, this group may have represented a more motivated segment of low-income mothers with young children. The possible influence of social desirability on mothers' descriptions of their efforts needs to be acknowledged, especially among those who believed their ability to parent was under the scrutiny of others. Although a concerted effort was made to empathize with mothers' child care challenges and be non-judgemental, the assumption was made that the interview data reflected informants' best efforts to represent themselves as safety-concerned mothers. Observations and comments made by women during home visits did show that some had made special efforts to clean and tidy their homes as well as make safety adjustments to prepare for the researcher's visit.

During data collection and analysis, attention was also paid to issues of reflexivity and relationality. Reflexivity refers to the consideration of how researcher-participant interactions may have influenced the research process. In this study, I carefully reviewed interview transcripts and fieldnotes to assess how these interactions may have affected the data that was obtained. One challenge that arose during data collection was when young children were present during the home interviews. In these instances, I found it important to attend to the ways that the

interactions between myself and the mothers in the study may have been influenced by interactions with the children, but also how my presence may have affected the mother-child interactions. At times, mothers commented about how their children's behaviour changed with the researcher present and this is something that was considered when analyzing the observations made of children's and mothers' behaviours in the home.

Relationality is another important aspect of the research process that refers to how power and trust affects the relationships between interviewers and interviewees. In this study, my social location as a university educated interviewer from a middle income background was quite different from that of the majority of the study participants. Efforts to enhance the reciprocity of the research process included sharing information about community resources and informing participants in a respectful way about home safety hazards that were observed during visits. As well, self-disclosure about personal experiences with child safety issues occurred when it was felt to be appropriate and provided a sense of shared experience. While I did have some experiences as a mother of young children that I was able to draw upon, I did not share participants' experiences of mothering while living on a low-income. In reflecting on issues of power and differing social locations, I strove to be accountable to the participants by presenting their perspectives as authentically as possible and by paying close attention to issues of anonymity and confidentiality in writing. The issue of confidentiality was also important during the interviews because several women knew one another through their use of common community services.

The findings from this study suggest several directions for future work in this area. The findings indicate that injury prevention practices should be aimed at developing home safety interventions for families that address contextual factors in both the social and physical environments. Additionally, the importance of policies to reduce income inequities and increase low-income families' access to safe and stable housing to help improve mothers' abilities to

effectively safeguard children in the home cannot be ignored. Finally, these findings provide a basis for continued theory development related to safeguarding children in the home.

This study provides a unique contribution to the literature on child home safety by describing a range of strategies that mothers living in low-income households used to keep their young children safe. Using an ethnographic approach helped to illuminate mothers' everyday safeguarding efforts, provide insight about potential influencing factors, and also privileged mothers' perspectives. Further research is needed on how mothers' safeguarding work can be best supported to enhance the quality of women's lives and improve the conditions under which they safeguard children to more effectively protect young children from harm.

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Chapter 3
A Discourse Analysis of Low-Income Mothers' Descriptions of Their Children's Injury and Near Injury Events[3]

Unintentional injuries that occur in the home pose a significant public health problem for young children and particularly for those living in poverty. While there has been a trend of decreasing injury related deaths and hospitalizations among Canadian children over the last two decades, injuries still remain the leading cause of death for children (Health Canada, 1999). In 2002, for children aged 1-4 years, injuries occurring in the home environment accounted for 67% of injury related emergency department visits as reported in the Canadian Hospital Injury Reporting Prevention Program (CHIRPP) (Public Health Agency of Canada, 2006).

While numerous quantitative studies have provided descriptive information on the risk factors and injury patterns associated with childhood home injuries, there has been very little study of mothers' perspectives regarding their children's injury events and how mothers construct their experiences of their children's injury or near-injury events.

In recent years, a growing body of literature has emerged on the topic of mothering and motherhood that has been dominated by a feminist constructionist theoretical perspective (Arendell, 2000). Within this perspective, mothering and motherhood are viewed as "dynamic social interactions and relationships, located in a societal context organized by gender and in accord with the prevailing gender belief system" (Arendell, 2000, p. 1193). Some of this literature has addressed how mothers socially construct their experiences including how a variety of social discourses may influence these constructions.

Social discourses reflect generally accepted social views and provide boundaries for what is seen as acceptable speech on certain topics. Several discourses described in the literature hold potential importance for developing understandings about how mothers socially construct ideas

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about their children's safety. These discourses originate from several different sources including increasing societal concerns about risks for children in general, the growth of professional child safety discourse, as well as from ideologies about motherhood, all of which play a role in how mothers construct their own roles related to the management of children's injury risks.

Scott, Jackson and Backett-Milburn (1998), for example, have described how increased societal anxieties about risks to children have developed as part of a broader growth of the modern "risk society," described by sociologists Beck (1992) and Giddens (1991). In this view, modern society is characterized by increased uncertainties about scientific facts and expert opinions with the result that individuals in society are engaged in the continual assessment and management of risks in all aspects of their lives (Green, 1997). Jackson and Scott argue that these increased societal concerns with risks have given rise to a preoccupation with prevention that includes the need to be vigilant against all potential threats to children. Within this discourse, childhood is constructed as a time of vulnerability and of being "at risk" and which parents are seen as having a duty to protect at all costs. Jackson and Scott, however, suggest that there may be negative consequences for children such as restricted autonomy and opportunity for new experiences. Discourses about how increased concerns about risks to children have contributed to children's sedentary behaviour and reduced opportunities for play and exploration have also received considerable recent attention in both the media and academic literature. Another prevalent discourse potentially shaping parental constructions about child safety is the discourse promoted by injury prevention experts and professionals. The professional view constructs child injuries as "predictable and preventable" (Dixey,1999; Green,1995) with the lay person constructed as holding incorrect and misguided views about injuries as "unpredictable" or "accidental." There is a large emphasis in the child safety expert discourse on the education of parents to improve their behaviours and this emphasis has been criticized as a discourse that blames parents if injuries do happen (Dixey,1999; Girasek,1999). Girasek (1999) also describes

describes direct efforts to alter child safety discourse by banning the word "accident" across the field as it is seen to imply unpredictability and thus unpreventability.

The growth of expert-driven safety discourse can be seen in the large array of safety and risk advice and educational materials aimed at parents of young children that is available through a variety of media as well as through schools, health care and safety-related organizations. Some evidence of a backlash against this proliferation of safety advice has been described by Mickalide (2000) who points out that there are signs of an "anti-safety mentality" emerging in the popular press such as articles that ridicule safety warnings and characterize safety efforts as overzealous.

Social discourses about motherhood and the role of mothers in preventing injuries are also important to consider. One dominant motherhood discourse described in the literature is that of the "good mother." Murphy (1999) explains how the necessary qualities of the good mother include: "selflessness, wisdom, responsibility and far-sightedness" (p. 188) as well as being someone who places priority on her child needs, even when this may be at her own expense in terms of personal inconvenience or distress (p. 187). A related ideology described in the literature is that of "intensive mothering" (Hays, 1996). Hays contends that intensive mothering forms a dominant contemporary cultural model of socially appropriate mothering in which child-rearing is construed as "child-centered, expert-guided, emotionally absorbing, labor-intensive and financially expensive" (Hays, p.8).

Contrasting to these discourses of ideal motherhood is the prevalent discourse of the "bad mother." A "bad mother" label is usually applied to those who are deemed neglectful or abusive to their children, however, bad mothering has also been blamed for large array of children's problems (Ladd-Taylor & Umansky, 1998). The bad mother label can also be applied to mothers who are seen as "overprotective." Ruddick (1980) describes how excessive or very rigid control of children is considered a liability in the overprotective mothering discourse.

Furthermore, Ruddick describes how portrayals of overprotective or controlling mothers "are often unsympathetic and even matriphobic" (p. 350).

There have only been a few studies in the literature examining how parents socially construct issues of child safety. Two qualitative studies have explored parental constructions of child safety in regards to older, school-aged children. In one of these studies, Backett-Milburn and Harden (2004) examined perceptions of safety risks from the perspective of the family as a whole, and reported that the negotiations between family members about risks were dynamic, fluid and co-constructed. Risk constructions were also found to be contingent on family members' perceptions about the safety attitudes and behaviours of members of their own family as well as the perceived attitudes and behaviours of other families. In another qualitative study of school-aged children in the UK, Dixey (1999) investigated the fears and concerns that parents held about their children's safety in relation to outdoor traffic hazards. Key themes from this study included that parents saw themselves as primarily responsible for their children's safety and that parents minimized risks through "eternal vigilance." Furthermore, parents held perceptions that a "good mother" was someone who engaged in a high level of surveillance and this was related to their perceptions of peer pressure from other parents to do so.

In another study focusing on parental perspectives on the safety of younger, preschool-aged children, Peterson (2004) examined parental narratives about their children's experiences with injuries resulting in emergency department treatment. The findings revealed how both mothers' and fathers' narratives displayed gender stereotypes. Parental narratives about daughters had greater elaboration, were more cohesive and provided more contextual information than those for sons. Narratives about school-aged children were also found to be lengthier and more elaborate than those for preschool children. Overall, parents were found to construct their children's experiences with injury in accordance with stereotypes of "males as tough and females as fragile" (p.323).

These studies provide some evidence that parental constructions regarding their children's risks may be continually shifting, may be influenced by all members of the family as well as by the perceived attitudes and behaviours of other parents, and may be shaped by societal values about the need for intensive surveillance of children. Child gender may also influence how parents construct their children's injury events. In the current study, mothers' perspectives about their children's injuries and near-injury events were explored. Mothers' perspectives are important to examine because they may hold unique social constructions related to the safety of their preschool children since they are the primary care providers of young children and have also traditionally been the targets of safety messaging and programming (Dixey, 1999). Thus, better understanding of the socially constructed meanings that mothers hold in regard to their children's injuries is important so that prevention messages can be better aligned with these meanings.

To address these needs for improved knowledge, this discourse analysis was undertaken to answer the following research questions:

1. What types of discursive strategies do mothers living on low incomes use in their explanations of their children's injury and near miss injury events?
2. In what ways are the discursive strategies used by mothers influenced by social constructions of motherhood in the context of safeguarding young children?

Methods

Study Design

There are a number of different theoretical approaches that are used for discourse analysis and that have developed from a variety of disciplinary perspectives. Methods for this current study are based on the perspectives of Wood and Kroger (2000) and Fairclough (1992). The analytic approach used by Wood and Kroger is based in social psychology and draws upon

the work of Potter and Wetherell (1987). From this perspective, discourse is defined as including "all spoken and written forms of language use (talk and text)" and is viewed as a "social practice" (Wood & Kroger, 2000, p.19). From this perspective, talk is seen as not only reflecting the social world, but also as continually helping to create it. The purpose of discourse analysis is to address both the content of people's talk and to identify how people use the content of their talk to achieve certain functions and effects. The current study also draws upon the ideas of critical discourse analysis developed by Norman Fairclough (drawing from the fields of linguistics and social theory). From this more critical perspective, discourse is also viewed as socially constructive, but there is a further emphasis on how power relations and ideologies in society are involved in the shaping and reproduction of discursive practices (p. 36). Furthermore, distinctions can be made between the idea of discursive strategies and broader social discourses. The use of discursive strategies refer to the ways by which people use language to achieve certain functions and is focused on concrete and situated use of language (Wood & Kroger, 2000). In contrast, the idea of social discourse that is emphasized in a critical discourse analytic perspective refers to a more abstract notion of discourses as forms of social practice that take place on larger, macro scales. These broader social discourses, also called interpretive repertoires (Wood & Kroger, 2000), are described as more structured systems that people use as resources that they draw upon to construct their own discourses about particular phenomena.

For this analysis of the discursive devices used by mothers, segments of data pertaining to injury and near miss injury events were selected because they provided a focus on actual events that had taken place. This focus allowed for analysis of mothers' explanations about situations where the child's safety had been compromised and how language was used by the women to explain these situations.

Setting and Participant Recruitment

The interviews were conducted with women living in a community with a population of close to 70,000 people that was comprised of rural, suburban and urban neighbourhoods and was located approximately two hours from a major urban centre in British Columbia, Canada. The data used for this analysis was a subset of a larger data set that was gathered through home interviews and observation visits with 17 women who were living at low-income levels as defined by Statistics Canada LICO lines. These mothers were the primary caregivers of one or more children between 1 and 5 years of age. The sampling strategy included both solicited sampling and purposive sampling strategies. Participants for this study were recruited in two ways. Firstly, mothers who were participants in the control arm of a separate ongoing child safety study were sent a letter inviting them to participate in the current study. Secondly, mothers of young children using the services of the local health unit and of three community-based parenting groups were invited to participate in the study.

Data Collection

Approval for the study was obtained from the UBC Behavioural Research and Ethics Board and from the health authority ethics committee. Data collection included semi-structured interviews with mothers as well as observations of mother-child interactions and of safety-related aspects of the home environments. In total, 28 home visits were conducted which ranged in length from 1 to 2.5 hours. A demographic questionnaire that was administered prior to the start of the interview included a question about as to whether their child had experienced an injury requiring medical attention (Appendix 8). The interviews included 18 open-ended questions with additional questions and prompts added to elicit fuller meanings from participants (Appendix 9). The questions regarding children's injury events included the following questions: "Can you tell me about a time when your child was injured unexpectedly?"; "Can you tell me about what that experience was like for you?" and "What happened after that experience?"

While these questions were specific to injuries that the child had suffered, some of the mothers also recounted close call experiences in response to these questions. When the interview questions about injury were asked, some mothers provided fuller explanations about the injury they had already documented on the form while others mentioned additional injuries that had not included a medical visit or close call experiences that had not resulted in injury. Injury events were also recounted earlier in the interviews when mothers were asked about the kinds of safety issues they were most worried about, since this question prompted discussion of situations that had taken place in the past and that had resulted in injury or near-injury.

In this study, the initial establishment of trust was a necessary element since mothers may have perceived questions about their child's injuries as intrusive or threatening. Furthermore, as part of the consent procedures, mothers had been informed that the researcher was obligated to report suspected child abuse to the appropriate authorities. Therefore, reports by mothers in this study may be limited by the degree to which women felt secure about disclosing information about injury related incidents. Therefore, the questions about children's injuries were introduced in the latter part of the interview to allow for building of rapport and trust. All except two of the 15 women who were asked about injury incidents were able to recount at least one injury or close call event and many of the women described several instances. As the interviewer, I strove to maintain a supportive and non-judgmental atmosphere throughout the interviews and presented myself as someone who was interested in learning about women's abilities and successes as well as their challenges and constraints and also as someone with both research and personal experience with children's home safety issues. Despite these efforts to promote an open and non-judgmental interview context, two women did not disclose any events and several provided very brief or minimal information. One woman who was very reticent in her explanations about her child's safety-related experiences had a previous experience of having a child who had died from SIDS which had resulted in an investigation by social services.

For the 13 mothers who shared information about at least one injury or near-injury event, the number of events that mothers described ranged between one and nine. While only one mother described nine events in relation to her two children, two mothers described six events each, and the remainder shared information regarding one to three events each. The richness of the descriptions also varied: five mothers provided rich and detailed accounts, three provided moderately detailed accounts and five provided brief, minimally detailed descriptions.

Data Analysis

The analysis of the textual data was guided by the approaches to discourse analysis developed by Wood and Kroger (2000) and by theoretical approaches to critical discourse analysis described by Fairclough (1992). The main steps in the analysis included: 1) identifying discursive devices that were evident in mothers' explanations of injury and near injury events; 2) identifying the functions of the discursive devices and 3) identifying patterns in the structure and function of the discourse and identifying main themes to describe these patterns. The textual analysis focused on the words and phrases that women used to describe their experiences as well as how their verbal descriptions reflected societal values about motherhood and safety issues. This interview data was supplemented by data from field note records documenting safety-related events that were observed during home visits and mothers' verbal reactions to these events.

The analysis process involved selecting sections of text that were specific to injury and near miss injury events from the full data set. These segments were examined and additional codes developed that reflected the various types and functions of discursive techniques found in the mothers' talk. Following this, all of the interview texts were re-examined in full to identify any additional descriptions of injury related events that may not have been captured with the initial coding. The resulting codes were examined for redundancy and consolidated to a set of 40 codes. Five major themes were identified that reflected the main discursive strategies that

mothers used. Each of these five themes and their sub-themes will be discussed along with how these strategies helped to position mothers in certain ways and how this positioning was linked to dominant social discourses related to motherhood and to child safety.

Findings

Mothers' Reports of Child Injury and Near Injury Events

Overall, there were eight injuries reported by mothers for which medical attention from a physician or hospital had been sought (see Table 3.1).

Table 3.1

Mothers' Reports of Child Injuries Requiring Medical Attention

Type of Injury	Frequency mentioned
Cuts (to fingers, eye)	3
Foot slivers	1
Dislocated elbow	1
Fall (injury to head or face)	3

In two cases, inconsistencies were noted between the data collected using the demographic form and the interview data. Specifically, two women who had recorded that there had been no injuries requiring medical attention on the demographic form later disclosed in the interview that medical attention had been sought.

Of the 13 mothers who provided descriptions of *minor injuries* or *near injuries*, there were a total of 35 events mentioned (see Table 3.2). These included injury events that were considered minor by the mothers and medical attention had not been sought. However, for some of these injuries, for example, the ingestion of potentially toxic substances, mothers reported that they had made calls to the poison control centre for advice.

Table 3.2

Mothers' Reported Minor or Near Injury Events to Children

Type of Injury	Frequency mentioned
Falls (from furniture, stairs, dropped by a person)	11
Ingestion or near ingestion of potentially toxic substance (laundry detergent, household cleaner, mushrooms)	8
Child escaped out of doors/run out close to or on road	6
Hit by object (wall, table, balloon)	4
Contact with hot object (oven, fireplace)	2
Contact with electrical outlet/charger	2
Choking incident (food item)	2

In addition to the interview data, observations were also made of mother-child safety-related interactions that took place during the home visits for 15 of the participants since there two mothers who only participated in one data collection session in which the child was not present. In all, there were a total of 35 observations documented across the 15 participants. While the majority of these incidents were only potentially linked to injury events, there were two incidents that resulted in minor injuries. One child who was playing with bubbles had some of the solution contact his eyes; and another child was bitten by her sibling. The remaining 33 events are shown in Table 3.3.

Table 3.3

Observations of Child Behaviour with Injury Potential

Type of incident	Frequency observed
Child made contact with potentially hazardous objects. (Including: hot object, electrical objects, toxic substances, other objects).	14
Potential access to hazardous situations. (Including: observed exposure to drowning and burn hazards).	6
Contact made with choking hazards. (Including: food, toys, coins).	6
Child exposed to fall hazards. (Including: climbing up on furniture, trees, table).	5
Rough play (Including: pet, siblings).	2

The number of observations made for any one participant ranged from zero observed incidents to 8 incidents. The distribution of the observed incidents was as follows: there were four mothers for whom 1 to 2 incidents were observed; there were five mothers for whom there were between 3 and 4 incidents; and for two mothers, 7 incidents were observed for each. While some of these observed incidents were only potentially linked to injuries (such as a child crawling up onto furniture), others were more clearly near injury situations (such a child pulling a cup of hot coffee towards himself).

The textual data used for this analysis included interview data from mothers' explanations about their children's injury and near-injury events as well as their verbal responses to safety-related events that took place when children were present during the interviews. This analysis revealed a variety of discursive strategies that mothers used to position themselves either in accordance with or in opposition to dominant discourses of mothering and child safety.

It was important to consider dominant discourses related to mothering ability because of the particular social circumstances of the women in this study. All of the women in the study were living on low-incomes with 6 of the 17 women reporting yearly incomes of less than $10,000. Moreover, close to half of the women in this study were single parents who held sole responsibility for the daily care and safety of their children. Additionally, several of the women with partners and nearly all of the single parent mothers had had previous contacts with the social welfare system and some had had previous experiences related to mental health issues and to situations of domestic violence. Researchers have described how mothers who are single and living on low-incomes, and particularly those who receive social assistance may experience higher levels of scrutiny and more negative judgments about their mothering abilities compared to mothers who are middle-income or part of two-parent families (Swift, 1995; Power, 2005). Research has also shown how mothers who suffer additional problems such as mental illness, substance use or domestic abuse experience additional stigma in society because they do not conform to accepted standards of "good mothering" (Greaves et al., 2002, p.101). Despite women's achievements in caring for children in difficult situations, they can be constructed as unfit mothers and, as a result, placed at risk of losing custody of their children.

It was important, therefore, to examine the ways in which these women used their language or "talk" to position themselves in accordance with or in opposition to various social discourses related to mothering and child safety. Furthermore, it was important to also consider how they may have been constrained in their abilities to contest dominant discourses. The discursive strategies that mothers used were reflected in the following five themes that emerged from the data analysis: 1) *Minimizing the nature of events*; 2) *Taking on blame*; 3) *Accounting for themselves;* 4) *Dispersing blame*; and 5) *Expressing challenges related to everyday practicalities of caring for children.* For each of these themes, the findings highlight the ways in

which women used various discursive strategies and how use of these strategies reflected dominant social discourses.

Minimizing the Nature of Events

Because the injury and near miss events shared by the women did not result in any serious injuries that threatened their children's lives, the women tended to describe the events in ways that put them into perspective. They did this by using language to minimize or downplay the nature of child injury or near miss injury events, and by framing descriptions of events in a way that de-emphasized the injury itself. This way of constructing the events appeared to have some benefits for women and situated many of the injury and near miss events as part of their everyday experiences of providing child care.

Use of minimizing language. In their descriptions of the nature and types of injuries that their children suffered, mothers frequently employed language that downplayed the injury itself or its potential seriousness. For example, one mother explained that she was pleased that she had only ever had to take one of her children to emergency "for a little boo-boo, to get a couple of stitches" while another mother described how her toddler had gotten "a taste" of laundry detergent, explaining how it was just "one of those silly things that kids do." Mothers' use of specific injury-related jargon also reflected these downplaying efforts, for example, use of the term "getting zapped" to refer to one toddler's experiencing an electrical shock, and use of the term "goose egg" to refer to another toddler's head abrasion.

Mothers also used humour at times when they shared information about the children's injuries. For example, mothers' replies to questions about times when their child had been hurt unexpectedly included: "Hey, all the time"; or laughingly "Which time?" while another mother described her calls to poison control as being so frequent, that "they know me." These elements of humour were sharp contrasts to the potential serious consequences of the events under discussion and served to lighten the subject matter and to normalize the children's injury

experiences. At times women provided descriptions about how the situation could have been worse or added descriptions of other, less serious events to provide further support for their constructions of the events. One mother followed a description of her call to poison control after her son had ingested some laundry detergent, with an additional description about how she had also called after he had eaten a worm. In the following segment, a mother and grandmother who were co-parenting a 2-year-old toddler, were discussing how the child had accessed the grandmother's medications and had swallowed two different medications, and bitten a third. The potential seriousness of the situation is slowly revealed through their dialogue regarding the advice they received from the poison control centre staff:

> **Mother:** I phoned right away for the poison control, and the woman there said well, the blood pressure pill that won't hurt him especially since he didn't take it all, it not a big deal, just keep an eye on him.
>
> **Grandmother:** The Celexa wasn't really a big deal either.
>
> **Mother**: The Celexa she said wasn't a big deal at all…The only thing that we had to watch with that was that it could make him really irritable, and it didn't…and a Tramadol.
>
> **Grandmother**: It's a muscle relaxant.
>
> **Mother**: Yeah, she said just watch him because it could make him really, really overly...sleepy, like it could make it so that he could…
>
> **Grandmother:** It could cause breathing problems.
>
> **Mother:** Yeah, he could fall asleep.
>
> **Grandmother**: And stop breathing….We had to check on him.
>
> **Mother**: So, we had to go in every twenty minutes when he went down for his nap and poked him right, to see if he moved.
>
> **Interviewer**: So, he didn't have a huge reaction from them?
>
> **Mother**: No, he didn't have a reaction to it.
>
> **Interviewer**: So what happened after that?
>
> **Grandmother**: Nothing, he was fine.
> [Grandmother and mother (19 years), single, co-parenting 2 year-old child].

This segment of text illustrates how the mother and the grandmother differed in the amount of information they provided regarding the potential seriousness of the child's pill-swallowing incident. The mother's strategy of downplaying through the use of everyday words such as "sleepy" and "irritable" can be seen as a way to "normalize" a potentially serious injury situation, and possibly help the mother manage her discomfort in not only reliving the event, but also sharing the experience with the researcher.

There was also some evidence from observational data of how several mothers responded to potential risky child behaviour by acting promptly but with muted emotional or verbal reactions, as though the event did not deserve more than this. For example, one mother who realized that her toddler had been walking around the home with a penny in her mouth removed the object, but verbalized minimally about the event. Another mother showed little verbal reaction when realizing her toddler was outside unsupervised and directed one of his siblings to go outside with him.

Uneven framing of events. Another way that mothers in the study used discursive strategies to de-emphasize children's injury events or their potential seriousness was through the use of an uneven narrative structure. Mothers' descriptions of the sequencing of events were uneven in terms of the aspects emphasized. Most of the descriptions included some elaborations regarding the pre-event circumstances such as who was looking after the child, or what the child and mother were doing at the time of the event. The post-event scenarios also received fuller explanations, such as mothers describing their responses as attentive and immediate: "I went running in there and grabbed him." Mothers also placed emphasis on descriptions of the post-injury events at the hospital such as the wait time, the difficulty with keeping a bandage on, while focusing less on the injury itself and the kind of medical intervention that was required.

Mothers also emphasized in many of the injury event descriptions how things had "turned out well" in the end, serving as reassurance that the situation had been managed well.

In many instances, mothers placed little emphasis on the events themselves. Sometimes the mothers' naming of the actual injury event was mumbled or barely audible. Most of the mothers did not provide full or rich descriptions of the nature or severity of the actual injury or of the child's reaction to the event. Descriptions of what could potentially have happened as a consequence of near miss injury events were also largely absent from the descriptions. Minimal elaboration about the actual event had the effect of reducing attention on injury event itself and may indicate that discussing actual injury events was a difficult thing for mothers to do.

Possible benefits of minimizing events. The use of minimizing language and the narrative framing of events to de-emphasize the injury event can also be viewed as a positive strategy that mothers used to manage their emotional states and to convey their competence in handling these kinds of situations. Many of the mothers described how they had been "scared," "freaked out" and "terrified" by some of the injury and near injury situations that their children had been involved in. Use of minimizing strategies can be seen as a way that the women were able to lessen their distress and convey their competence in handling this type of adverse situation. While mothers did not tend to provide detailed descriptions of how their children reacted to injury events, there was modest evidence suggesting that mothers may also have minimized injury situations to help reduce children's distress. One mother of a 2-year-old boy, described how if the child hurt himself in minor ways she often "just ignored him" and how this resulted in her child not typically crying over a minor injury "unless he really hurts himself because I didn't baby him." Thus, the minimizing by mothers can be seen to help them reduce their own distress and possibly, also to lessen children's reactions to and distress about minor injuries.

Taking on Blame

Mothers' accounts of instances where their children had experienced an injury also revealed how at times mothers used statements in which they blamed themselves for the injury incident. The emotional tone and conviction associated with accepting blame created a context for engendering empathy and lessening the potential for mothers' safeguarding behaviours to be judged negatively. For example, one mothers stated how it was it was "100% my fault" that she had not strapped her child into the grocery cart and that he had fallen out and hit his head. This mother described how this experience had been terrible for her child as well as for herself:

> There was also that one time that was completely my fault and now I've learned my lesson. That is, he fell out of the grocery cart. And that one scared me pretty good. But actually, I was probably in worse shape than he was....They had First Aid there immediately and they stayed with me...until I stopped shaking and crying, and B (son) had stopped crying way before I stopped crying, but it was 100% my fault and I've learned my lesson....To this day...every time I go to the grocery store, I still see it in my head. [27-year-old mother, with partner, child 17 months].

By accepting blame for injury events, women clearly positioned themselves as mothers who accepted their responsibility and were women who cared for their children. In addition, mothers' use of statements that involved self-blame about failing to take preventive action (for example, admitting to not using a shopping cart safety belt) also helped mothers to position themselves as knowledgeable about appropriate preventive measures and remedial actions. The grandmother who was co-parenting a toddler along with her daughter illustrated this idea by saying, "Grandmother learned a lesson the other week...do not leave your pills lying around." Such expressions of taking on blame and adding statements about having "learned a lesson" helped the grandmother in this situation to convey that her vigilance was renewed following the event to guard against future incidents.

Accounting for Themselves

Some of the injury events that women shared occurred when they were absent and the child was under the care of another person. In these situations, the women made special effort to

provide detailed explanations of their whereabouts and the child care arrangements they had made in their constructions of the events, pointing out in various ways that they had left the child in what they believed to be capable hands. These explanations appeared to be prompted by assumptions that as the child's mother, they may be held accountable for the injury event or that they had neglected to consider child care needs. In the following example, the mother of a 21-month-old boy described how the child fell off his new toddler bed while she was absent from the home:

> I guess the first day; my brother was here watching him for awhile. Yeah, he was watching him. T. [the child] wanted him to stay, he was all excited. He climbed on there, I guess. I was at work. He [the child] was jumping on it [the bed]. He fell and hit his head. [20-year-old mother, with partner, child 21 months].

Another mother recounted how her two children aged five and seven had run off outside while they were under an uncle's care:

> I had someone call welfare on me because my kids were outside one morning by themselves and well, I wasn't even here. So I feel bad that they were out there by themselves, but I wasn't here, so there was nothing that I could have done to stop it. I'd gone to meet my real dad, so my brother was here. So he was downstairs playing video games and well, the kids took off and were running around by themselves in their pyjamas. Yes, we heard about that, anyway, somebody had phoned welfare. [26-year-old mother, single, two children ages 5, 7].

This mother explained both the reason that she had needed to be away and how a close family member had been left in charge of the children during her absence. Although this incident did not involve an injury, the consequences were serious for the mother since someone in the neighbourhood had contacted child welfare authorities.

These explanations reveal how, despite having been absent from the home, women felt some responsibility for the injury or near miss events that took place. This demonstration of responsibility may reflect internalized social constructions of motherhood that hold mothers responsible for children's safety even when other people are providing the care and supervision, and that blame mothers when things go wrong.

Dispersing Blame

When injury or near miss events occurred in the care of others, constructions of these events were characterized by statements that helped the women to resist assuming all of the blame for children's injury events by describing how partners, other adults as well as children themselves held some responsibility for injury events that occurred.

Dispersing blame to partners and others adults. Mothers made many indirect references that shifted blame to their partners (or ex-partners) or others for their child's injury and near miss injury events because they had been looking after or playing with the child when the injury occurred. One mother described a fall that involved her son when he was 18 months old. She explained how he "had a toddler bed and his dad had left the bathroom door open and he got into the bathroom....He'd climbed up onto the counter and all of a sudden I just heard this 'clunk.'" In this instance, the mother inferred the father's responsibility by specifying how he had left the door open. Another mother described how her son and her husband were "playing on the bed and he [the son] fell off the bed and hit his nose on the corner of our nightstand."

These constructions of events suggested that mothers exerted some resistance to the commonly held notion that the mothers are solely responsible for children's health and safety. Furthermore, they effectively conveyed the idea that other adults also hold responsibility for the prevention of children's injuries.

Dispersing blame to children. In accounts of injury events, mothers also frequently drew attention to children's characteristics and behaviours they believed contributed to injury-related situations. The following excerpt illustrates how one mother focused on the role of her child's behaviour in an incident in which his head had hit a door:

> Well, he was half asleep and I was carrying him into the bathroom to go change his diaper. And I think he felt that he was going to fall or something and he readjusted himself, just as I was going through the door. Like that perfect timing, like if he had done it three seconds before, or like in either direction, he would have totally missed the door and he would have been fine, but no, no, he had to do it right then and go "smack." [Grandmother and mother (19 years), single, co-parenting child, 2 years].

Characterizing children as "daring and adventurous," a "climber," "very independent," and "very busy" served to foster a sense that through their natural tendencies, they were inclined to act in ways that were individual and part of their personality. Focussing on children's behaviours allowed women to convey the idea that child-based factors may also play a role in injury.

Challenges Related to the Everyday Practicalities of Caring for Children

Through their descriptions, mothers conveyed a sense of the challenges they faced in trying to prevent injuries and near miss injury events on a daily basis. There were three main challenges involved and these included the difficulties in predicting children's behaviour, the competing demands of children's developmental needs, and the competing demands related to mothers' other daily tasks. Mothers' descriptions of these challenges revealed some of the conflicts they faced as well as their adherence or resistance to dominant discourses and ideologies related to mothering and child safety.

Difficulties predicting child behaviour. There were many instances found in the mother's talk where they constructed injury-related situations as related to unusual or unexpected behaviour on the part of the child and, therefore, took the mother by surprise. This unpredictability was further complicated by the speed of the child. Several women pointed to this as an important factor in the injury or near injury event, explaining "he's definitely quick, that's for sure," "she had gone across a block and a half, just like that," or "he got up there in a flash." Others emphasized the unexpected nature of the child's behaviour by situating the injury event in the everyday nature or innocence of the activities that had placed children at risk: "he was running and catching bubbles." Using these discursive strategies, mothers portrayed the prediction and preventability of such injuries as very difficult and framed lapses in prevention as understandable. The women's statements also stood in contrast to prevailing professional safety discourses that "all injuries are predictable and preventable." This expert-driven, safety

discourse also holds mothers as primarily accountable for the safety of young children in a similar way that other professional public health discourses are implicitly aimed at mothers (Burnham, 2001; Lupton, 1995; Malacrida, 2002). Further evidence of resistance to this discourse was found in mothers' statements about how some accidents "just happen" along with references to the everyday nature of injury events. For example, one mother spoke of the types of events that her five-year-old son experienced that she considered non-serious such as "falling off his bike and that sort of thing"; while another mother described how her toddler had "fallen off the couch, fallen off a chair and pinched his fingers in the closet" and that she considered these events to be "pretty much expected for this age."

These statements suggest that mothers considered many of their children's injury-related incidents to be unpredictable in nature and that minor events were to some extent, inevitable. Invoking these oppositional discourses helped women counter safety discourses which imply children's injury events are predictable and preventable.

Meeting the competing needs of children. This was the second type of challenge conveyed in mothers' talk. With this challenge, children's needs for protection from injury were at times seen as being at odds with their needs for independence, play and exploration. Justification for some of the injury or near miss experiences included explanations of the child's needs for learning and independence. One mother described how "children have to learn...they have to make some mistakes to learn" and that "they have to know what falling down and scuffing your knee feels like." Another mother also stated how "accidents just happen, you can't not let them play, you know." These kinds of rationales invoked discourses of concern with other aspects of their children's development and learning as well as explanations that some injuries were just inevitable consequences of children's play and exploration. These arguments allowed mothers to demonstrate their interest in and efforts to support their children's learning and development. As one mother stated, "I will protect them [children] by doing certain things

to stop them, but only to a limit." One mother mentioned how "sometimes it's not good...too much protecting," while another mother explained how "children have to learn, they can't just have everything done around them perfectly, so that they never make a mistake, they have to make some mistakes to learn." Mothers also demonstrated resistance to dominant safety discourses by indicating they did not want to be "overprotective." The idea of being overprotective referred to how it was possible to be "too" safety conscious and thus too controlling of the child and their activities.

These ideas about potentially negative aspects of "too much" protection are consistent with discourses of the "overprotective mother" that has been widely addressed in the literature as a discourse that blames a host of childhood problems on maternal behaviour (Arendell, 2000; Ladd-Taylor, 1998). Within the mother-blame discourses, mothers are criticized for being not protective enough as well as for being too protective. In this study, mothers' explanations of how they strove to meet children's competing needs for play and independence allowed them to provide a rationale for the occurrence of adverse events that was consistent with good mothering but that avoided the negative connotations associated with being overprotective.

Competing demands of other daily tasks. This third type of challenge conveyed in mothers' talk related to how mothers efforts to accomplish other daily tasks such as housework and meeting personal needs could at times conflict with their children's supervision needs. For example, one mother of a 22-month-old and a four-year-old explained how it was difficult for her to accomplish other household tasks such as doing the dishes since "I'm constantly supervising them and I don't get a lot of stuff done that way." This mother also provided an example of how meeting her personal needs were affected by explaining how she usually waited to have her shower until the evening when her husband would be home. Other mothers, however, conveyed how competing demands related to the accomplishment of other daily tasks made it at times impossible to provide constant supervision. For example, some mothers explained how

they had been busy with personal or household tasks when an injury event occurred. For example, one mother explained how she had left her children alone in the kitchen while the oven was on with the statement that "I knew that I had five minutes and I really needed a shower." This mother also provided further explanation of how her actions were reasonable:

> I didn't expect her to go and open it [oven door], right? But, she did and I can't stand there for an hour while a cake is cooking beside my oven to make sure my kids don't go into it. I just never expected her to do that and that scared me.
> [27-year-old mother, married with 3 children, ages 4 months, 2.5 years, 5 years].

Such lapses in supervision were thereby constructed as necessary in order for mothers to meet their own needs and to fulfill their roles.

Mothers' explanations of their competing demands allowed them to indirectly contradict the hegemonic ideology of mothers' sole responsibility and accountability for child safety. They accomplished this through statements about challenges they faced in meeting other daily needs and household tasks and by expressing the impossibility of providing constant close supervision. One mother expressed this by saying "you feel like you have to follow them around all the time and of course I couldn't do that."

In summary, women in the study used discursive strategies to highlight additional contextual information about the circumstances surrounding the injury event that related to the child or the mother herself. This type of talk allowed the women to express some of the constraints that affected their ability to carry out their role as a safety conscious mother and provided a route to resist ideas consistent with the rhetoric that mothers should be held completely responsible for their child's safety under all circumstances. Furthermore, by framing children's injury experiences as outcomes of their activities related to play and exploration, mothers were able to convey their concerns for their children's development overall in addition to their concerns for their safety.

Discussion

Many of the women were found to construct their children's injuries as unexpected and unpredictable events which runs in opposition to the prevalent safety discourse which emphasizes the predictability of injuries and that all "injuries are preventable." There was also some evidence of resistance to these ideas in the ways that mothers framed children's needs for play and exploration, and the inevitability of some mishaps. Furthermore, mothers also expressed, through references to the negative aspects associated with being an overprotective mother, some resistance to idealized notions of good and safety-conscious mothering. Mothers' descriptions also highlighted how, although they did their best to monitor children, the realities of conflicting demands constrained their ability to provide the level of monitoring necessary to prevent all mishaps.

These study findings contribute to understandings of mothers' subjective experiences related to their children's injury and near injury events by highlighting various discursive strategies that mothers used to explain these events. Discourse analysis allows for examining the ways that women position themselves in relation to dominant ideas in society. However, this is not to say that women's accounts directly reflected their inner mental states and decisions about safety behaviours. Rather, it is possible, for individual women to hold variable constructions about child safety. This analysis allowed for an assessment of how women used language to frame their behaviours and opinions in certain ways. Women's constructed meanings may also have set parameters around what is acceptable to say about their children's safety. This approach has been used by other health researchers such as Murphy (1999) who analyzed women's accounts of their choice to breastfeed or bottle feed children and showed how women used language to legitimize their decisions and opinions about feeding practices in culturally acceptable ways. Similarly, this analysis of women's accounts of their safety-related actions when their children experienced an injury or near injury event allowed for examination of the

social constructions that mothers held about child safety issues, and how such constructions reflected dominant social discourses and culturally acceptable ideas about motherhood and child safety.

Women's use of these strategies showed some consistency with other research and theory about how women use discursive techniques to position themselves in certain ways. For example, the way that mothers in this study used strategies to minimize the seriousness of their children's injury situations can be compared to the findings of a grounded theory study by Lawlor (1991) in which nurses were found to use verbal and behavioural techniques to minimize the nature and significance of patient-related problems. In this research, nurses were found to use "minifisms" (p.166) that consisted of using understatement or humour to help define situations as unremarkable and to reduce distress for patients and allowed nurses to bring situations under control and to maintain their composure. Similarly, for mothers in this study, the use of minimizing may have helped them to decrease their own distress by normalizing injury events as well as potentially minimizing their children's distress levels. Lawlor (1991) argues that in nursing, minifisms can "operate to render care invisible" and "poorly valued" (p. 169) and these techniques camouflage the real nature of the work including the considerable emotional labour involved. While it can be argued that mothers' use of minimizing strategies may have camouflaged their emotional stress in dealing with injury situations and rendered their safeguarding work more invisible, placing emphasis on how they managed the post-injury situation allowed them to convey how they had adequately managed an adverse situation. Further research is needed, however, on how minimizing strategies might be related to decisions about accessing health care services for a child's injury.

In this study, mothers also accepted blame for injury events and this was often accompanied by expressions of feeling scared, embarrassed or upset about children's injury events. While the women's true feelings are not under question, the way in which those feelings

were voiced did help to elicit a sympathetic response and thus helped mothers to reduce the potential for being judged in a negative manner. In a similar vein, in their study of mothers who smoke, Irwin, Johnson and Bottorff (2005) reported how mothers used expressions of guilt and shame to uphold their standings as "good mothers" despite the exposure of their children to second hand smoke.

The study findings also highlighted how mothers demonstrated their sense of being held accountable for children even while they were absent from the home. These findings are consistent with theoretical work on mothering in which "mother-blame" is seen as pervasive in western culture (Arendell, 2000; Malacrida, 2001) and in which mothers are held culpable for harms to their children that occur in their absence (Sanger, 1999). In this study, mothers' explanations about their absences during an injury or near injury situation reflected this sense of being held accountable.

Discursive strategies used by mothers illuminated the tensions between different constructions of motherhood and revealed that there may be points of conflict between child safety ideology (where a "good mother" is seen as highly protective and successfully prevents all injuries to her child) and the contrasting ideology in which an "overprotective" mother is considered a "bad mother." Finding the right balance between being safety concerned and conscientious, but not overprotective is a difficult task for women, especially when juxtaposed with rapid developmental changes in early childhood and fears related to surveillance by others, including social services. These findings are consistent with those reported by Dixey (1999) who examined mothers' views of their daily efforts to keep their school-aged children safe from traffic hazards. This study reported two main themes: firstly, that parents saw themselves as holding the main responsibility for protecting their children and secondly, that they protected them by engaging in as much surveillance as possible and that this was constructed as "good parenting." The result of this for parents was a resentment of the vigilance that was expected; as

well as not knowing "whether they were being 'overprotective' and 'paranoid'" (p. 52). Dixey (1999) further describes how the psychological well-being of the mothers in their study was negatively affected by their concerns about the level of risk in the outdoors and their perceived need for intensive surveillance of children. These findings suggest a need for further study of low-income mothers with younger children and how tensions between their perceived needs for surveillance of their children in and around the home, their worries about being overprotective and their heightened concerns about the real possibilities of being reported to social services may affect their stress levels and psychological well-being.

Related to the concept of 'overprotection', it is also important to note findings of recent longitudinal research showing that children's rates of injuries were lower among mothers with higher scores on protectiveness (Morrongiello & Corbett, 2006) and that protectiveness was also associated with closer supervision of children. These findings suggest that injury prevention messages may need to be designed and tested that encourage protective behaviours among mothers, but that are not perceived as being "overprotective" and potentially perceived as stifling of the children's developmental needs.

Additional areas for further research include closer investigation of how women as well as men differentiate between notions of protecting children and overprotecting them. Interviewing fathers about their experiences with their children's injury and close call events would also allow for assessment of men's practices of fathering in relation to safeguarding young children. For example, it would be helpful to understand the extent to which both mothers and fathers view their children's minor injuries as normative. Finally, there is also a need for additional studies on the socially constructed meanings related to mothering and child safety that are held by mothers living in a variety of social, economic and geographic conditions.

Having limited resources meant that the women in this study drew on individuals around them to provide child care while they worked or carried out activities outside the house. One

practice implication that can be drawn from this is that practitioners should consider broadening injury prevention messages to more broadly target all types of people who care for and supervise young children, for example, grandparents, older children and other caregivers. Framing injury prevention messages to appeal to a broader community could assist with fostering social attitudes that a large range of people are responsible for and should be interested in the safety of children. Policy implications also include the need for child care supports for low-income mothers that are safe, accessible, and affordable and that offer flexible options such as drop-in sessions.

Other aspects of the prevailing safety discourse to which mothers expressed some resistance included ideas that injuries are both predictable and preventable. Girasek (2006) suggests that the emphasis on the preventability of injuries as part of safety campaigns may have negative effects, including that this concept may be interpreted as operating at the individual level; that optimism biases may be higher for what are seen as preventable health problems (Weinstein, 1999); and that parents may decrease their vigilance after taking actions that are purported to prevent rather than reduce injuries (Morrongiello & Major, 2002). Furthermore, messages about the predictability of injuries are based on a professional standpoint and reflect the statistical probabilities of injury risk at the group level, but that can not predict risks at the individual level (Girasek, 1999; Green, 1995). Thus, mothers' explanations of how their children's injury events were often unexpected and unpredictable, may accurately reflect how predicting the occurrence of any one of a large number of possible events for a particular child is difficult. Thus, for the development of injury prevention messages that are better aligned with the socially constructed meanings that mothers hold, it may be important to replace absolute statements about the preventability of injuries with messaging on how injuries can be further reduced across groups of children. This would help to reduce the implication that all injuries can be successfully predicted and prevented for any one child.

In addition, the emphasis by mothers in this study on the competing demands related to daily household and personal tasks as well as meeting children's developmental needs also ran counter to discourses regarding the complete preventability of injuries. Practice implications to address these issues include the need for the development of safety messages that are relevant to the norms and realities of mothers' everyday lives. As well, injury prevention strategies should be developed that show support for meeting the developmental needs of children for play and increasing levels of independence.

The mothers participating in this study expressed how it was important for them to prevent injuries to their children, but they also explained how many of their children's injury events had occurred unexpectedly, how they felt that there was an inevitability for some level of injury as a part of childhood, and even how minor injury events could serve as a learning tool for children. These findings can be seen to mirror findings from the injury prevention literature which have shown inconsistencies across parental beliefs about injury. For example, studies have reported that parents view injuries as largely preventable (Sparks, Craven & Worth, 1994) and that parents hold very favourable attitudes towards childproofing the home (Gielen et al., 1995). Findings from other studies, however, have described how parents may see injuries as normative and as events which are likely to occur (Morrongiello & Dayler, 1996; Sparks, Craven & Worth, 1994). In a survey of mothers and fathers of 159 children ages 15-40 months, Lewis, DiLillo & Peterson (2004) also reported that 73.5% of the parents agreed with statements regarding the learning value of injuries. Kendrick, Watson, Mulvaney & Burton (2005) also point to the need for additional research of parental child safety beliefs and perceptions because of the lack of current evidence about how these beliefs and norms are related to safety behaviour use and injury occurrence as well as how income status affects these relationships.

The results of this study suggest that deeper running discourses about motherhood, risk and safety may influence mothers' attitudes and that further studies are needed. Injury

prevention practitioners should, therefore, not assume that mothers' attitudes towards safety are uniformly held or congruent across different subgroups of mothers, or even that safety beliefs are entirely consistent within individuals. Therefore, an important area for further study is to examine the degree to which mothers may hold incongruent beliefs about safety and how this may be related to their use or non-use of safety behaviours. For example, mothers' beliefs about the importance of keeping children safe may be at odds with their beliefs about children's developmental needs for exploration, play and increasing independence. Developing better understandings of mothers' socially constructed meanings and to what degree mothers are influenced by them is needed in order to develop injury prevention messages that are congruent with such meanings and avoid messages that conflict. Increased congruence of injury prevention messaging with mothers' constructed meanings would increase the likelihood that such messages would be taken up and acted upon by mothers of young children.

Finally, policy efforts are needed that address the gaps that exist between the realities of low-income women's lives and the cultural expectations of mothering. Examples of ways that mothers' efforts to prevent injuries could be better supported include the provision of safe play areas for children by municipalities and property owners and improving mothers' access to child care. These policy issues are particularly important for single mothers who hold sole responsibility for their children's care.

The findings of this study need to be considered in light of several limitations. It is possible that some participants did not feel comfortable sharing all the details about the injury and near injury events that they reported. Although the accounts of injury or near injury events provided by the participants are based on their perceptions and may differ from the actual event or other's account of the event, the data provides a useful basis for understanding women's experiences and the influence of social discourses. Furthermore, injury events that result in significant morbidity or mortality may be constructed in unique ways.

In conclusion, the findings from this analysis revealed a range of discursive strategies that mothers living in low-income households used to describe their children's injury and near injury events. These strategies functioned in different ways so that women could both adhere to dominant ideologies of "good and safety conscious motherhood" but that also allowed them to construct adverse events in ways that resisted dominant safety discourses. To accomplish this, mothers were found to invoke other discourses such as the need to promote child development and to avoid overprotection, both of which still allowed mothers to position themselves as good mothers. Thus, the findings from this study have provided important insights into the mothering experiences of women living under considerable financial constraints and have provided, through the use of a social constructionist framework, a furthering of knowledge about the meanings that mothers hold in regards to their safeguarding efforts. This new knowledge can help to inform the development of injury prevention messages and strategies that are congruent with the meanings that mothers hold in regard to safety and mothering. The development and testing of such strategies could help to increase the relevance and appropriateness of interventions aimed at mothers living in disadvantaged conditions and better support their efforts to safeguard their young children.

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Chapter 4
A Gender Based Analysis of Low-Income Mothers' Efforts to Safeguard Young Children in the Home Environment[4]

Unintentional injuries pose a serious threat to the health of young children in Canada. A substantial number of injuries to young children are known to occur in the home environment (Glik, Greaves, Kronenfeld & Jackson, 1993; Pollock, McGee & Rodriquez, 1996) and children living in low income households suffer from both greater numbers of and more severe injuries than those living in higher income households (Laflamme, 1998; Roberts & Pless, 1995). Despite numerous studies on parental safety behaviours and their correlates, there is only a small amount of research evidence that specific behaviours or sets of behaviours are linked to injury risk reductions. In a recent prospective study, Kendrick, Watson, Mulvaney & Burton (2005), demonstrated that two specific safety behaviours used by families (having a working smoke alarm and the safe storage of sharp objects in the kitchen) were associated with lower rates of hospital admission for children. Positive parenting style has also been found to be associated with reduced risk for childhood injury among 2-3 year-old children (Soubhi, Raina, & Kohen, 2004).

While the focus on examining parenting safety practices and parenting style and their influences on childhood injury outcomes has been helpful, very little is known about how the child safeguarding experiences of mothers, who provide the majority of the general daily care of young children in the home, are organized along gendered lines. There has also been a lack of research focus on the nature of household dynamics at the family level and how gendered relations in the household might contribute to or protect children from injury. The purpose of this study was to explore how gender plays a role in the child safeguarding practices of low-income mothers with young children. The research questions included:

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1) How is household labour for child safeguarding in the home environment divided amongst family members?
2) How does this division of labour reflect gendered roles and relations?
3) How are gendered roles and relations linked to issues of access to and control of resources needed for this safety work?
4) What factors reinforce these gendered divisions? What are the gains or consequences for women and for their safeguarding efforts?

Using a gender lens is an important way to increase understandings about health behaviours. In a population based approach to health, both sex and gender are conceptualized as determinants of health (Health Canada, 2003). Furthermore, incorporating sex and gender perspectives into research is increasingly recognized as a way to allow for more comprehensive knowledge production and to promote equity in health. Krieger (2003) defines gender as a social construct and emphasizes its distinction from sex, which is a biological construct. Gender refers to the conventions, roles and behaviours of both male and female individuals, but also to the relations between individuals (Krieger, 2003). Gender has also been conceptualized as a construct that operates on multiple levels including the individual, interpersonal and institutional or cultural levels (Knaak, 2004). In a recent review of how concepts of sex and gender can be incorporated in health research, Johnson, Greaves and Repta (2007) operationalize gender according to three components: gender identity, gender relations and institutional gender. Gender identify refers to how people perceive themselves as gendered persons and how this is linked to their behaviours, values and perceptions of feminine or masculine roles. Gender relations refer to how people interact with others based on their gender category and how these relations may be affected by power differentials between women and men. Gender relations also include the ways that people interact in families and the ways that socially constructed roles affect these interactions. Finally, the concept of institutional gender addresses how powerful institutions in society may influence and shape the opportunities and resources available to individuals based on gender such as economic or social opportunities. These conceptualizations of gender may be helpful for furthering understandings about the ways that mothers' child

safeguarding work may reflect gendered experiences. Gender based research approaches are also described by Johnson, Greaves & Repta (2007) as important for investigating diversity in women's experiences and that studies focussing exclusively on women can provide valuable information about their health issues.

Gender perspectives have underpinned research on mothering practices and this area of literature has grown in recent years (Arendell, 2000). Theory relating the concepts of gender and motherhood has also been described by several authors. West and Zimmerman (1987), for example, describe gender as a "routine accomplishment embedded in everyday interactions" (p.125). Gender is viewed as a category of being and as a process or activity to manage conduct according to normative expectations that accompany a person's membership in a male or female sex category. For mothers, gender is seen and re-created on a daily basis through everyday activities such as caring for children. Fox (2001), however, argues that few studies have examined the gendered social relations that take place between partners, family members and others that may influence how women experience motherhood.

McMahon (1995) also describes how women's mothering practices, including domestic and family work, are divided and contribute to a gendered experience of parenting. McMahon conducted interviews with 59 Canadian mothers and explored how their self-conceptions were influenced by motherhood, how they combined paid work and motherhood, and how domestic work was shared by mothers and their partners. McMahon explained how mothering was found to both reflect and produce a gendered experience of self. Insights from the theoretical and empirical study of the experiences of mothering support the need for additional examination of how the gendered nature of mothering practices are related to the ways in which children are kept safe in the home environment.

There are a few studies in the literature in which a gender perspective has been used to better understand mothering practices in the context of health related issues such as mental

illness, domestic violence, and substance use (e.g., Greaves et al., 2002; Shalansky, Ericksen & Henderson, 1999; Baker & Carson, 1999). Findings across these studies revealed that women's experiences of mothering under difficult situations were influenced by social constructions that they were "unfit" mothers, and by bureaucratic systems that devalued their mothering abilities and kept the interests of mothers separate from the interests of their children. These studies also reported how mothers, despite living in a variety of difficult circumstances, generally expressed a very strong commitment to their children and to maintaining the mother-child bond. Another uniform finding of these studies was that approaches and policies used across different systems such as the legal system or social services, including child welfare, often worked against maintaining bonds between mothers and their children. Studies that utilize a gender perspective are thus able to draw attention to gender-based discriminatory practices and inequities, and focus attention on women's perspectives of their mothering experiences. Studies that do not take gender into account run risks of perpetuating stereotypical views of mothering and not allowing for examining of ideas that oppose dominant mothering ideologies. Non-gender perspectives may also overlook diversity across women's experiences of mothering as well as fail to take into account the nature of the challenges that mothers living in adverse situations face and how this may affect their own health and that of their children in the long-term.

In the area of child safety and injury prevention, research has shown how parents' safety behaviours and narratives regarding their children's injuries vary according to the gender of the child (Morrongiello & Hogg, 2004; Rosen & Peterson, 1990); however, there has been little examination of the gendered aspects of mothers' child safety practices. One qualitative research study explored the strategies used by mothers to protect preschool children from violence in the home and the community (Mohr, Fantuzzo, & Abdul-Kabir, 2001). While this study provided insights about the experiences and child safety practices of mothers, the research focused on

violence in high-crime urban areas in the United States and the ways that gender shaped mothers' safety practices was only minimally addressed.

Studies on men's and women's contributions to household labour have also shown that despite some shifts in the patterns of domestic tasks, women continue to do more household labour than men and that gender is "a more important determinant of housework time that any other factor" (Shelton & John, 1996). Furthermore, examining safety-related work as a component of housework is important to consider in regards to mothers of young children since the care of young children in particular has been found to require more intense levels of involvement and women have been found to spend more time on housework when there are preschool children in the home (Grace, 1998; Shelton & John, 1996). As Fox (2001) points out, researchers have described how parenthood results in more traditional gendered patterns in household work, however, fuller understandings and better conceptualizations are needed about how child safety work is related to gendered patterns of domestic work.

The primary purpose of this study was to examine mothers' safety work as a component of women's work in the home using a gender lens to gain new understandings of how mothers' safeguarding efforts may be constrained or facilitated by gendered relations. Second, mothers' perspectives on how fathers' safety efforts may differ from their own were examined to explore how such divisions may affect women's abilities keep their children safe.

Methods

Study Design

This qualitative study was guided by a social constructionist perspective. Of particular interest was the production and influence of gender in women's safeguarding work. Assumptions underlying this study were that the concepts of gender and motherhood are closely intertwined, and motherhood is an experience that produces a gendered sense of self (McMahon, 1995). The

analysis also drew upon a number of theoretical perspectives including the work of Johnson, Greaves and Repta (2007) and Knaak (2004) in which gender is conceptualized as consisting of three main components that include gender identity, gender relations and institutional gender. Gender roles were defined, in accordance with this perspective, as "the behavioural norms applied to males and females in societies, which influence individuals' everyday actions, expectations and experiences" (Johnson, Greaves & Repta, p.5). Furthermore, the study design reflected a female only study approach to explore the gendered experiences of low-income mothers in relation to their child safety efforts.

Setting and Participant Recruitment

A community in the Fraser Valley of British Columbia served as the setting for this study. Participants were eligible for inclusion in the study if they: a) resided in the community; b) were the main caregiver and mother of a child between one and five years; c) lived in a low-income household as defined by Statistics Canada Low-Income Cut-Off (LICO) lines and d) did not live on a working farm. Mothers were defined as the primary caregiver if she agreed that she was the main person looking after the child the majority of the time. Several strategies were used for the recruitment of subjects. These included solicited and purposive sampling of mothers who were part of an ongoing study, posting notices at the health units, and in-person presentations to three separate community-based, parent support programs. Participants who had been part of the ongoing study were contacted by mail with telephone follow-up, while those who responded to the advertisements or attended a presentation about the study contacted the researcher directly. Potential participants who were interested in the study were screened for study eligibility by telephone using a study eligibility assessment form (Appendix 6).

Data Collection

Approval for the study was obtained from the UBC Behavioural Research and Ethics Board and from the health authority ethics committee. Data collection methods for the study

included in-home interviews lasting approximately 60 minutes and home observation visits lasting approximately 2 hours. In all, 28 separate home visits were made with 17 participants, 11 of whom were visited on two separate occasions, while 6 were visited once. Fieldnotes were written following both the home interviews and observation visits. Interviews were semi-structured and several questions were included that elicited information from mothers about gendered roles related to their safeguarding efforts. These questions included asking mothers about the kinds of things they did on a daily basis to keep their children safe, their main safety risks concerns, and who made home repairs when they were needed. Since male partners were not interviewed for this study, information regarding their roles was mainly limited to the mothers' perspectives on their partners' roles with safeguarding children. Interview questions that specifically assessed mothers' perspectives of their partners' roles included questions about whether their partners were concerned with the same safety risks as they were; whether there were similarities or differences between the things they did and the things their partners did to keep children safe, and what happened when there were differences. There were also questions included that asked mothers about situations when other people were caring for their children and how other people made it easier or more difficult to keep children safe. Home observations were also made of mothers' safety efforts, the kinds of household chores they were engaged in, and in several cases, observations of their partners' activities when they were in the home. The semi-structured interview questions were refined as the analysis progressed. In a final set of four validation interviews, additional questions were developed to assess mothers' opinions on emerging themes.

Data Analysis

The procedures for coding and analyzing the data were based on the steps for qualitative data analysis as outlined by Miles and Huberman (1994). The interview and observational data were coded using first level codes that indicated different issues related to gender roles and

gender relations. These included instances where mothers described their child safety efforts as part of their mothering role, as well as their perceptions of how their concerns or behaviours related to child safety were similar to or different from their partner or other caregivers. These gender-related codes were retrieved from the original set of coded data and this sub-set of data was reviewed using a set of sensitizing questions that were generated from the research questions, and from literature on gender roles and the nature of women's work in the domestic sphere. The questions included the following:

- Who does what safety related tasks in the home and what values are reflected in these divisions?
- What is it about safeguarding work that makes it women's work?
- How are gendered roles reflected in the ways that household space is used?
- What resources are required to do this work and what kinds of access to and control over these resources do women have?
- What kinds of factors influence women's safety work in the home and what are the impacts of these factors on women's efforts and children's safety?

In this study, these questions provided an analytic frame of reference for examining the gendered nature of safety related work in the household and how this impacted mothers' safety efforts. Examining the gender related data using these questions resulted in a further development and refinement of codes, resulting in 38 codes. These 38 codes were then further condensed into a smaller number of pattern codes. These patterns or themes were generated by identifying how mothers' descriptions of their safety related practices reflected: gendered social relations in regards to the women's work in the home; linkages to inequitable access to resources; and linkages to women's gendered identities as mothers.

Findings

These findings provide an overview of how mothers' descriptions of their everyday safeguarding activities revealed the gendered nature of this work. The following description of

the participants' living situations provides a background for the subsequent discussion of the key themes that emerged from the analysis.

Study Setting and Participants

This investigation was based on interviews and observation visits made with 17 low-income women during 2004-2005 who resided in a medium sized community approximately two hours away from a major metropolitan area in Western Canada. This community was comprised of urban, suburban and rural neighbourhoods. The mothers in the study were of varied ethnic backgrounds with seven of the women identifying themselves as Canadian, four as First Nations, two as British/European and four as Other. Six of the mothers reported a yearly income of less than $10,000; five mothers reported incomes between $10,000 and $20,000 and another six reported incomes between $20,000 and $40,000. Eleven women reported that they were married or living with common-law partners. Of the six mothers who were single, four reported that they had never been married while two were separated. All of the mothers reported that their current or ex-partners were males.

Five mothers reported they were currently working, ten were keeping house, while the remaining two women were looking for work (1), and a student (1). Of the eleven mothers who were currently living in married or common-law relationships, seven reported that their partners were working. The five mothers who reported that they were working outside the home described how they relied on the following people for childcare while they were at work: grandparents (2), friends (2), and partner (1). Of these five working women, four were living with partners and one mother was a single parent. There was also one mother who was currently looking for full-time, subsidized daycare for her children, because her day care arrangements with a friend were only short term.

There were three major themes and eight sub-themes that summarized the different ways that mothers' descriptions of their safeguarding practices reflected aspects of gender. Firstly,

there were two types of *child-directed mothering safety practices* that reflected patterning along gender lines: *watchful involvement* and *looking to the future*. Secondly, there were three sub-themes that reflected the *gendered relations between mothers and their partners* and these included: *parental disciplinary style*, *promoting adventurous play* and *sharing responsibility*. Thirdly, the theme of *managing physical and social space* included the following sub-themes: *arranging safe household space*, *efforts to make repairs*, and *selective socializing*. These three sub-themes reflected how gendered relations were manifested in both the physical and social contexts where mothers undertook safeguarding efforts and affected those efforts in various ways.

Child Directed, Safety Related Mothering Practices

Mothers' descriptions of how they protected their children on a daily basis through their mothering practices reflected the following sub-themes: 1) *watchful involvement*; and 2) *looking to the future*. These two sub-themes reflected mothers' perceptions about how their ongoing efforts protected their children from both immediate as well as future safety threats.

Watchful involvement. This theme characterized the gendered nature of the mothers' descriptions of their child focused safeguarding work that included teaching, supervising, and intervening with children. Mothers described how their efforts to watch over their children's activities and teach them about doing things safely involved a need for constant vigilance and ongoing assessment of the child within their environment. As the mother of a 17-month-old boy commented: "I just sort of look at different situations, what could happen here, what could happen there."

In addition to this ongoing surveillance of children's whereabouts and activities, mothers also described how they believed that in order to really be aware of how different activities could pose a safety threat, they had to also be actively involved with and "know their child." This included knowing "where the child was at" and knowing what they were capable of doing in any

given situation. Some mothers acknowledged that this was not fool-proof because it was impossible to predict every potentially dangerous situation, but that generally, they had to be "in-tune" with their child's capabilities and interests. For example, one mother of a 16-month-old boy described how it was important for her to be knowledgeable about her child's abilities in order to judge the dangers involved in his various activities:

> It's a judgment call. What your kid can handle because every kid's an individual, right?...You base it on your kid and you should know your kid, right? Like if you're bonding with him you'll know what he can handle and what he can't...you've got to watch and you've got to see what they can do and what, they're able to do with out getting into too much danger, too much trouble. [29-year-old mother with partner, 16-month-old child].

One mother described how she considered it important to "know where your kids are at" and "to become involved with them" while another mother expressed her belief that "for your kids' safety...if you didn't know your kids and have those relationships; it would be very, very difficult to know where their boundaries are." These mothers described how their involvement with their children and knowing their abilities and limitations facilitated their safety efforts.

Mother's description of their partners' role in child-focused safety efforts ranged widely in terms of the degree to which they perceived that partners engaged in "watchful involvement." There were two fathers whose involvement included providing daily safeguarding that was described by mothers as involved, vigilant and equal in terms of effort. Both these situations, however, showed unique features. In one family, the mother was confined to pregnancy-related bedrest and was unable to conduct her usual child care activities. This mother characterized her partner's involvement as a temporary situation that she thought would revert to more traditional roles after she gave birth. In the second situation, the father had experienced, as a child, the death of a sibling due to a poisoning from a household product and this had heightened his concern for and vigilance regarding safety issues for his own child.

There were also some fathers whose close involvement and interest in safeguarding were described by mothers as being equal to their own (and in two cases, mothers' reported that fathers' safety interests exceeded theirs); however, since these fathers were working out of the house for the majority of the day, the daily responsibility for "watchful involvement" fell to the mothers who were at home with their children for many more hours. Furthermore, mothers also described how their partners often engaged in non-child care activities such as working on the house or on cars when they were at home and thus the women maintained the primary responsibility for child safeguarding.

There were also situations where the partners' low level of *watchful involvement* gave the mothers the sense that their child's safety was jeopardized. One mother explained how her partner was unable to supervise their toddler for more than a few hours, while others described how ex-partners had provided inadequate supervision in the past. Some of the reasons that mothers provided to explain this inadequate supervision included that parents or ex-partners had been or were impatient, lacked temper control, cared little about safety issues, relied on others to supervise, and were focused more on their own activities than the children's activities.

The *watchful involvement* that mothers engaged in was a highly gendered aspect of their safeguarding work that was closely tied to other aspects of everyday childcare. In many instances, mothers described how safety issues arose within the context of carrying out other traditionally female household work. For example, one mother of a 17-month-old boy explained how when she washed the dishes, she would place a chair for the child to stand on by the sink so that he could help, and that she would "take off his socks so he doesn't slip" and how later in the day, she would fold laundry in the bathroom while the child was in the bathtub. Thus, mothers' safety-related behaviours were found to be closely integrated with meeting other childcare needs such as daily care, feeding, socializing, and learning. These kinds of activities were time intensive and also reflected how the mothers engaged in multi-tasking. Mothers who were at

home also had some control over how their time was organized as well as some flexibility in how they arranged their child care and household tasks during the day. However, the constancy of the supervisory and monitoring activities, and responsibility for other household tasks such as laundry and cleaning that most mothers described also doing, detracted from their control over this time resource.

Mothers also expressed how they experienced satisfaction and positive feelings from their efforts in keeping their children safe and this appeared to reinforce traditional gender divisions in safeguarding work. For example, one mother of six children expressed how keeping her children injury free made this work satisfying:

> There's satisfaction in knowing that I have six children and I've only had to take one to emergency for a little boo-boo, to get a couple of stitches. That's really satisfying. I mean, it may not look like much to somebody else, but...it's not like a scorecard...but it does mean a lot. [33-year-old mother with partner, six children[5]].

In addition to experiencing satisfaction from efforts to keep children safe, mothers also expressed how being involved with their children and protecting them from harm was also linked to their feelings of *care and concern* for their children and a desire to keep them safe. This same mother explained how she was willing to engage in the considerable amount of effort needed protect her children because of her feelings of love and concern for them:

> I'm so protective of them, I love them so much and if anything ever happened to them that I could have prevented, I would feel so bad and so responsible...I want them to grow up and have good lives. And do everything I can, and if that means constant vigilance, so be it. I'm happy with that for now. Content with that for now, because I know there will be a day where I will not be able to do that and then I just kind of have to trust that what I've taught them will be good enough.

For male partners, factors constraining their equal participation in these more time consuming and psychologically intensive aspects of safeguarding included the amount of time spent at home and being available for child care, and their involvement in more traditional male role activities when they were home.

[5] The number of children has been slightly altered to protect the participant's anonymity

Looking to the future. Some mothers described how their safeguarding efforts were aimed at helping their children learn about making safe decisions in the present as well as in the future through fostering independence at an early age and allowing choices. For example, the mother of a 16-month-old boy explained:

> If you teach your kid to become an individual and make his own choices now at 16-months-old then at 16-years-old I might have to worry less about him....Everything I do now is to keep him safe now, but it's also trying to keep him safe later. [29-year-old mother with partner, male child, 16 months].

Another mother also described how safety considerations were linked to her children's success in the future:

> I want them to have good futures and possibilities and good, happy, healthy, joyful lives. That's what my goal for my children is. So, if I can keep them safe until they make their own decisions and hopefully give them enough knowledge and wisdom through that time to help them make good life decisions for themselves. That's what my goal is. [33-year-old mother with partner, six children[6]].

For this mother, the idea of keeping her children safe until they could make good decisions for themselves was also tied to her own identity as a mother:

> I'm on my children all the time. I want them to have a good future. I want them to have the best possible future that they can have....It's my heritage, this is my legacy. This is what...I am planting into my children. People generations down the line are going to know who I am by what kinds of things I do with my children. How I let my children grow up. How my children act when they're older. That's going to be...how people are going to look at who I was as a person. I want to leave something good.

Good safety practices not only contributed to ensuring good futures for this woman's children, but were also tied to her sense of identity by reflecting who she "was as a person." Furthermore, this mother described how she considered that being a "mom" was her primary role and thus her safeguarding work comprised an important part of this gendered role as a mother.

[6] The number of children has been slightly altered to protect the participant's anonymity

Gendered Relations Between Mothers and Their Partners

There were three sub-themes that reflected how the child safety related social interactions between mothers and their partners were patterned along gendered lines. These sub-themes included: *parental disciplinary style, promoting play and fun, and sharing responsibility.*

Parental disciplinary style. Child-focused safeguarding activities also included parental use of disciplinary measures for safety related issues. Disciplinary style was one area where several mothers reported discrepancies between their own and their partners' style of discipline. For example, one mother described how she used a variety of strategies to prevent her 16-month-old son from doing potentially dangerous things, for example, by distracting him with alternative activities, moving things out of reach, teaching about why things were dangerous and using verbal reprimands. She described how her approach contrasted with her partner's in that he gave the child "heck all the time." She also described how her partner expected the child to be obedient because he was "the dad":

> He just thinks that...he should just not touch it [the stove] because he's – he doesn't want him to. It's not, well, no it's not like that. He's only a little boy. He doesn't understand that, you know. He [the father] just thinks that, well if I say "no" that should be it because I'm the dad or whatever, right? [29-year-old mother with partner, male child, 16 months].

Developing positive parenting strategies requires access to time as well as to resources for increasing knowledge and developing skills. Mothers in this study reported using a wide variety of sources to become more informed about child safety and parenting strategies. Information sources that were cited included books, magazine articles, parenting courses, parenting information on the internet as well as resources available at parenting groups and at the health unit. Mothers also made direct references to specific parenting books, authors and child-rearing techniques. It is, however, not possible from the study data available to draw conclusions regarding the degree to which male partners also used these resources. Nevertheless, it is likely that male partners used these resources to lesser extent since traditionally, public

health and child care information has targeted mothers as the main caregivers within the family (Lupton, 1995).

Promoting play and fun. Some of the mothers in the study described how their partners' interactions with their children were often more playful than their own. For example, one mother described how although she would engage in activities with them such as reading or baking, she didn't "play" with her children, while her husband was more involved in the "fun" aspects. Mothers also highlighted that despite the benefits of their partners playing with the children, the play activities that partners engaged in were at times more active and physical. One mother described how her 17-month-old son was injured two times in one day while he was under her partner's supervision and engaged in father-son play activities.

A close connection between fathers' facilitation of children's play and the potential for injury was also observed during a home visit with a couple with a 16-month- old boy. During a discussion with the mother about how her and her partner differed in their safety behaviours, the father who had entered the room during the conversations, described how he engaged in more roughhousing with his son and proceeded to pick the child up and hold him by the ankles to demonstrate how he played more roughly with the boy than the mother did. These findings point to a potential lack of time, energy or patience on the part of mothers to engage in direct and physical play with their children; but also suggests that some fathers may be less tuned into sensing when "fun" activities may become more dangerous and result in an injury to the child.

Sharing responsibility. Many of the women who were living with male partners expressed how it was important for them to be able to share their safety-related concerns and responsibilities with their partners and to be able to trust their partners' safety efforts. Mothers also described how having a supportive partner with whom they could "take turns" allowed them to take needed breaks. In contrast, several women described how they had previously lived with partners who they felt had not shared similar levels of child safety concern and effort as

themselves. These mothers' reported how their own safety-related efforts were increased as a result of their partners' non-supportive behaviours that had included poor supervision practices and leaving hazardous items within reach of the children.

For women in the study who were single, it was not possible to ascertain from the data collected whether parental disciplinary styles or play styles differed from those of women who were partnered. There was, however, some evidence from the data that single mothers did experience difficulties and stress from doing the safeguarding work on their own without having someone with whom they could share concerns and responsibilities with. One single mother with two children ages five and seven expressed the following frustrations:

> It's like I'm the source for everything, you know, and it's hard to just say, oh, I'm going to take some time off, well, that doesn't happen and S. my friend has been really good, but she's alone too you know....We spell each other off periodically, but its not the same as if you have a spouse or have someone to share your worries with or someone to say, "It's okay, relax"...or to share the responsibility of...everything really. Because I want them to be safe and I want them to have a happy childhood, but yet I feel like, uuggghh, I'm on all the time and it just never stops...and now that I'm working and it's new so I think I'm very stressed right now and so I'm having a hard time juggling it all. [36-year-old mother, single, two children ages five and seven]

Thus, safety-related mothering practices for those who were single were characterized by a sense of continuous and sole responsibility, which for some, resulted in considerable stress and fatigue.

As part of sharing responsibility for child safety with their partners, mothers also spoke of the importance of communicating with their partners regarding safety-related issues. Several mothers described how it was a common practice for them and their husbands to regularly "check in" with each other about the children's activities and whereabouts. One mother explained how she and her husband would do a verbal "check" on a frequent basis to confirm who held responsibility for their two and four-year-old children's safety at any given time. A mother of a 17-month-old toddler, however, explained that explicit discussion of safety rules and their enforcement was not something she and her partner typically discussed and that this sometimes led to inconsistencies about what the child was allowed to do. Overall, mothers'

reports reflected their perspectives that being able to share child safety responsibilities and communicate about issues and concerns with their partners facilitated their child safeguarding efforts and also allowed the mothers some reprieve from being constantly aware and vigilant.

Managing Physical and Social Space

Three themes were identified that showed how aspects of both physical and social spaces impacted mother's safeguarding work and reflected gendered divisions of labour in the household, including *arranging safe household space, efforts to make needed repairs* and *selective socializing.*

Arranging safe household space. This theme refers to the ways that mothers described how they created safe space for children in the home. This included organizing separate play areas for children, arranging objects safely (for example, by moving hazardous objects up high and out of reach), and using safety devices such as electrical outlet covers, cupboard locks and door locks. There were, however, ways that partners' use of the space made it more difficult for mothers to control the hazards that their children were exposed to. For example, the mother of a 16-month-old toddler expressed frustration about electrical cords which her partner wanted kept in a certain area that was accessible to the child. She found this particularly frustrating since she then had to further restrict the child's play area in an already small apartment. In another home, the interior of the house was observed to be well-organized and tidy, while the outdoor area contrasted sharply. This area adjacent to the house was strewn with tools and car repair materials as well as several cars that were currently being repaired by the mother's partner. Another mother described that she felt the entire house was "his place" and that she had little say about how the home was organized. Finally, there were several mothers who had been in former relationships with partners who they felt had endangered their children by leaving hazardous items within their reach such as electrical chargers and cigarette butts.

Many mothers also expressed frustration about having a limited amount of indoor play space for their children and about the degree of decision-making control they had regarding the use of indoor space. This reflected a dominance in the decision-making power held by their partners as well by property owners who disallowed certain changes to be made to apartment dwellings. This latter factor was affected by the large extent to which the low-income women, and especially the single women, were more likely to be renters rather than home owners. The end result was that mothers needed to intensify their own safeguarding efforts to counteract the additional safety risks.

Efforts to make needed repairs. For nearly all the mothers, male partners or other male family or friends were described as being responsible for carrying out or assisting with safety related household repairs and maintenance tasks. One father, for example, had installed a plywood barrier to prevent a toddler from escaping from an outdoor deck while another father of a three-year-old had constructed an out of reach shelf inside a closet specifically for storing hazardous products. One mother described how her husband, who was a tradesperson, took care of the electrical work that she was particularly concerned about:

> Mother: My husband can do basic carpentry, and he's a (tradesperson).
> Interviewer: So, that's handy then.
> Mother: Yes, it is. Because he always knows. Like that's one thing that I'm really paranoid about. Is that I don't feel safe unless I know all the ins and outs of anything....I don't understand how electricity works; therefore, I won't meddle with it. It terrifies me. Electricity. Having one of my kids electrocuted uuhhh! Terrifies me. So, my husband takes care of all that stuff, makes sure all those little plugs are plugged in, makes sure all the switches work properly. I don't want to have my house burn down because a switch wasn't working properly. So, he makes sure that all that kind of stuff is safe. Anything even starts to go; he fixes it, right away. [33-year-old mother with partner, six children[7]].

For those mothers living on their own, securing assistance for needed repair and maintenance tasks was often difficult since they depended on assistance from others. One

[7] The number of children has been slightly altered to protect the participant's anonymity.

mother, for example, described how her father had arranged for her small deck to be rebuilt so that it was safe for her children and how a "Mr. Fix-it" neighbour had helped her when her refrigerator door fell off. Safety-related tasks that fell under the responsibility of property owners included installing and testing fire alarms, building fences, removal of hazardous materials from apartment hallways and lowering hot water heater temperatures.

The efforts to make needed repairs showed a high level of gendered differentiation and required access to significant resources such as time, financial resources, skills and knowledge. While men were described by mothers as largely holding the greatest degree of responsibility for these tasks, their control of over their time and financial resources was hampered by having low-paying jobs and little time available to do this work. Many of the mothers spoke of lacking the skills and knowledge required to undertake repair work themselves. Furthermore, women with no access to help from others were hindered by a lack of access to the financial resources to hire needed help. Many of the mothers also lacked control over the decisions about what work should be done and when. For example, one single mother and grandmother who were co-parenting a 2-year-old boy had been told when they rented their accommodation that a fence would be constructed for them so that the child could play safely outside. However, when they moved in, they were told they would have to pay the costs themselves and their comments reflected their sense of being unfairly treated by the property owner:

> Grandmother: We had wanted to put a fence up and he had said yes, but now he wants to know what type of fence I'm putting up, and then you know I said, by rights, we don't own the place, he should really be doing it, he should be putting the fence up...if we ask for a fence, because we have little kids and I don't expect the whole yard to be fenced, I just wanted the one small area.
>
> Mother: They said they were planning on fencing it when we moved in, that was part of the reasons we took the house because like the road is right there and it is a very busy road and we get semi's and stuff that go by there, and he had said they planned on putting a fence up, that's one of the reasons why we took the place... [Grandmother and Mother co-parenting 1 male child, age 2 years].

Power differentials between women and men affecting their efforts to make safety repairs are reinforced and maintained through a continuing lack of access to financial means for repairs and access to skill-building resources needed for learning repair skills. A lack of priority for child safety considerations among those who control resources for household repair and maintenance also served to undermine efforts of mothers to protect their children who were living in less safe physical environments.

There were also several mothers who undertook their own household repair efforts. Two mothers, for example, who had received some assistance from their fathers, demonstrated their own levels of resourcefulness in the household repairs efforts they made. One mother who was married with two children ages two and four had made a number of safety modifications to the inside of the house with the help of her father, and had constructed on her own a small fence at the side of the house to prevent her children from running out into the street. This fence was sturdy in appearance and the mother explained that it served its purpose well.

Another single mother who owned her mobile home and received some help from her father also described her own repair efforts that had included tearing down a dangerous deck and removing and rebuilding a wooden flowerbed structure outside. She described how her income level also made it difficult to make these kinds of repairs:

> Well, I'm basically at the bottom of the chain on social assistance, very low income, very little money coming in and I still make time and am very resourceful to find ways to keep my kids safe...I couldn't afford to build my porch right away, but I tore it down, I just needed a hammer and a crowbar. It was only...ten dollars for both or twenty dollars at the most, and then you know, I took that out of the food money, but then they were also not climbing up there and getting hurt anymore. I completely ripped it down and put it up in the front. [27-year-old mother, single, two children, ages four and seven].

There were also mothers who described using safety measures that were temporary or that made do using available household items. For example, several mothers used elastics or plastic bags to tie cupboard handles to together while others described how they used tape to block their children's access to the refrigerator or to electric cords and outlets. One single

mother of a two-year-old had tried, unsuccessfully, to secure a wall unit to the wall to reduce the chance that it could fall over on her toddler if he tried to climb it. This mother described how she had been unable to drill a hole in the wood and instead had taped the unit's drawers to prevent her toddler's from climbing up:

> So, I've got the end taped shut because its got a drawer in the middle that folds out...if it falls open, which it has a tendency to do sometimes, if he [son] grabs a hold of that, the whole thing is gonna come flying down. So, its taped shut so that can't happen, so I'm gonna have to either hope that he never climbs on those or if it comes down to it, I'll have to just take them down. [27-year-old mother, single, 2-year-old male child].

Although most of the women described how their household repair efforts usually involved assistance from male partners, family, friends or property owners that showed a conformance to conventional gender stereotypes, several women counteracted these stereotypical constructions about women's roles in the home by relying on their own resourcefulness to carry out this work. Some of their strategies, however, involved taking money away from their food budget or using makeshift strategies that may have questionable safety value for children. For some of the women, particularly those who were single and had unsupportive partners and lacked other social and financial resources that they could draw upon, were significantly compromised in the types of safety related home repair work that they were able to carry out.

For the women who were single, in comparison to those who were partnered, there were aspects related to managing the physical household space that presented additional and significant challenges. While some of the single women had the benefit of being able to make autonomous decisions about the use of physical space in the home, there were also hindrances for those who wished to make repairs and alter structural aspects of the home. In additional to lacking the financial means to make repairs, lone mothers described how they needed to rely on or negotiate with others such as relatives or landlords for assistance and that this was at times very difficult, especially for those who were not comfortable with being assertive. For example, one mother of two children who had written complaint letters to the apartment manager

regarding needed repairs explained that since she had become a single parent, she had had to learn to "stand up for herself" but that this was a difficult thing for her because "confrontation is not something that I do well with...but realizing that...I can stand up and say what I need and what I want and that's okay." Therefore, through their mothering practices and efforts to safeguard children, some of the mothers were able to learn more assertive behaviours and challenge more traditional, non-assertive female gender roles.

Selective socializing. Selective socializing was a strategy that many of the mothers described using that involved a restriction of the range and closeness of their social contacts. They used this strategy to protect their children from unwanted social influences and physical safety risks. This strategy also protected mothers from unwanted scrutiny of their parenting practices. This restriction included a reluctance to form friendships with other mothers, a mistrust of people other than close family to provide childcare, a need to carefully monitor the people coming into the home and a reluctance to have contact with professionals who might place additional scrutiny on the women's mothering practices.

Some of the mothers thought that their mothering practices were under considerable scrutiny from neighbours and other social contacts, and this contributed to their reluctance to develop social ties with people who they believed could potentially report them to social services. While it is not clear from the data in this study whether fathers also engaged in "selective socializing" to the same degree as mothers did, it could be argued that this would likely be a gendered activity since mothers are generally regarded as the parent mainly responsible for the safety of children. Furthermore, for some women, the risk of being considered a "bad mother" whom someone would report to the authorities was a strong threat to their self-identity as mothers. As one mother who was married stated:

> For someone to think that I'm a horrible mother? That is so crushing because that's all I am. I am a mom. I'm a wife and I'm a person but mom's pretty much [my] head role, its been that way for a long time...and for anybody to thing that I'm a horrible mother would just be crushing....And so, it's a very, very real fear to me and, of course, when its one of your biggest things, right, and your fear is to lose it...social services. It's just terrifying. [33-year-old mother with partner, six children[8]].

Mothers' restriction of social contacts was influenced by having access to spatial divisions as a resource and their ability to retreat with their children to the private space of home. Living in more crowded housing conditions where there was a need to share space, however, limited this ability. Additional factors that contributed to some mothers' desires to avoid potential scrutiny included the power differentials that were believed to exist between the mothers and both child services and health provider authorities. The power of child care authorities to investigate mothering practices led to concerns among some of the mothers about the types of contact they had with child services and health providers, and some of the mothers explained that this resulted in an increased reluctance to have contact with these service providers.

Compared to the partnered mothers in the study, single mothers voiced their concerns about scrutiny of their mothering practices and about being *reported on* to a greater degree. All of the single mothers in the study reported that they had had previous contact with child welfare authorities and expressed significant fears about the potential for being investigated. One single mother of two children described how she was "always told that once they [social services] were involved, that they will get involved [again] at the drop of a hat....So, it's always my concern that...I'm going to be accused of something that I didn't do." This mother also described how in her town, "particularly being a single mom, there are few choices for friends," and that "people will phone [social services] to be ignorant or to be rude" or that some people would "be mad at one girl, so they phone the ministry." For this mother, this resulted in her restricting her social

[8] The number of children has been slightly altered to protect the participant's anonymity

contacts and increased her level of isolation. She explained that by doing this "you pay a high cost because I haven't connected with anyone...and so I've been just sort of on my own and have been waiting to meet people of like mind I guess and I haven't found that so far."

Another single mother with two children told of how she no longer was involved with the property council because another council member had called "child welfare on me and they were going to come and take my kids away, they thought I was a poor mother." Thus, for these single mothers, a perceived lack of access to supportive and trustworthy relationships in the community hindered their ability to make social connections and this resulted in feelings of isolation and a sense of there being few supports available to them outside of family members.

Discussion

The findings of this study reveal how mothers' safeguarding work is deeply influenced by gender operating at different levels. Aspects of gender were found to play a role at the individual level in terms of women's identities as mothers; at the interpersonal level of social interactions between mothers, partners and others; and at the institutional level through gendered divisions in domestic roles. The analysis revealed three main themes related to the gendered nature of mothers' safeguarding work: *child-directed mothering safety practices, gendered relations between mothers and their partners, and managing physical and social space.* Access to and control of resources were also found to be linked to the gendered aspects of this work. Important resources included: money, time, space and spatial divisions, decision-making power, knowledge, and skills and it was found that mothers in the study were arguably at disadvantage in their access to many of these resources.

The findings need to be interpreted in relation to the sample of women who participated in this study and the context in which they lived. The majority of the participants were Caucasian and resided in a rural community where norms related to women's roles may be more

firmly entrenched. Among women who identify with other ethnocultural communities or who are in other socio-economic circumstances, the impact of socially prescribed gender roles and gender relations may be different. The safeguarding practices of the women who participated in this study, however, provide an important window into extending our understanding of mothering. These findings revealed that mothers' experiences of their everyday safety related practices reflected a gendered process. The themes of *watchful involvement, sharing responsibility, arranging household space* and *making needed repairs* all reflected the ways that social situations around child safety issues were gendered experiences. According to McMahon (1995, p.269), "the social organization of motherhood contributes to the social construction of gender differences" and in light of the findings of this study, it can be argued that the social organization of mothers' child safety practices also contributes to the social construction of gender due the embeddedness of safety activities with other mothering tasks.

Mothers consistently described their efforts to engage in watchful involvement as involving close connections with their children and feeling "bonded" or "tuned-in" with them and they believed that this sense of connection was needed for effective safeguarding. The strength of the mother-child bond and the how this might be related to childhood injury has been addressed only minimally in the injury prevention literature. Mull, Agran, Winn & Anderson (2001), for example, describe the results of their qualitative study in which children of low-income Mexican mothers who lived in poorer and more hazardous conditions than the white or Mexican-American children in the study were found to benefit from stronger family bonds and showed fewer injuries. Closer supervision of children by mothers has been shown to reduce injuries (Morrongiello, Onjenko & Littlejohn, 2004) and, therefore, research questions that arise include: Do mothers who have more closely bonded mother-child relationships engage in closer supervision of children? And are higher levels of maternal-child connectedness associated with lower rates of injury?

Regarding the themes of *watchful involvement* and *sharing responsibility*, it was clear that much of mothers' safeguarding work was closely embedded with other tasks related to caring for children and engaging in household tasks traditionally carried out by women. While it was clear that mothers thought that their continual monitoring of children was eased when they could share responsibility for safety with their partners, this was not the case that for those who were single or had partners who did not share their safety concerns.

In the study by McMahon (1995), both middle and working class mothers described gendered aspects of their mothering experiences that reflected how they were more responsible for childcare than were fathers and how other family work was not shared equally. Mothers in that study also reported feeling an overall greater sense of moral and "ultimate" responsibility for the well-being for children that their descriptions of fathers' perceptions did not share to the same extent. This is also consistent with the findings from the current study that revealed how mothers described a sense of overall and future responsibility for their children's safety that was reflected in the theme of *looking to the future*. While it is known that children of single parents are at higher risks of injury (Roberts & Pless, 1995), the impact of unequal sharing of domestic and safety-related work between mothers and fathers on childhood injury has not previously been addressed by injury prevention research. One hypothesis is that mothers who experience unequal sharing of responsibility may experience higher levels of stress and fatigue than those who can share these responsibilities and that this may lead to less effective safeguarding strategies and more injuries among children.

Mothers in this study also perceived that their partners often engaged in more of the fun related aspects of childcare than they themselves did. This finding is consistent with other literature on gendered household division of childcare labour (Lamb,1981; McMahon,1995). What is not known, however, is whether fathers' propensity to engage in rougher play which was

described by a number of the mothers may place children at increased risks of injury during these types of activities.

The themes of *arranging household space* and *making needed repairs* also revealed the gendered nature of mothers' child safeguarding experiences. Mothers' descriptions and researcher observations revealed how the organization and use of space in some homes reflected gendered household roles and how some women expressed having difficulties in securing needed household repairs. These findings are similar to other research findings on the household division of labour that show the gendered and unequal divisions in the types of work that men and women do in the home (Coltrane, 2000) as well as gendered aspects on the use of space in the home (Dyck, Davis Lewis & McLafferty, 2001). Injury prevention research has shown that living in housing that is in poor condition is associated with higher levels of injuries to children (Dal Santo, Goodman, Glik & Jackson, 2004) as well as with higher levels of events with injury producing potential (O'Campo, Rao, Gielen, Royalty & Wilson, 2000). Furthermore, mothers' preventive behaviours addressing modification of the home environment have been shown to be associated with lower injury levels compared with mothers' use of child teaching strategies (Morrongiello et al., 2004). However, intervention programs that target parents and encourage environmental modifications in the home may encounter barriers that are gender-related. For example, injury prevention messaging may fail to be taken up if it is aimed primarily at mothers who, although they may hold the overall responsibility for ensuring children's safety in the home, may not have the power or resources to carry out repair and structural work in the home. Furthermore, partners or landlords who do not hold similar concerns regarding child safety issues could present a further barrier to making safety related changes in the home. One emerging hypothesis is that mothers may experience barriers to implementing household modifications or repairs when these tasks fall into their partners' domain of housework responsibility and when they do not share similar safety concerns. This issue has not been

previously addressed in the injury prevention literature and suggests the need for research addressing whether children are at greater risk from household hazards in situations where women have low levels of support for making household safety modifications or lack adequate resources.

Implications for research include the need for both qualitative and quantitative approaches to develop better understanding of how mothers' safeguarding is linked to the gendered relations associated with domestic work in the home and how this might impact the safety of children. Qualitative approaches are needed to further explore the dynamics of the social situations in the household related to how the gendered nature of child safeguarding work takes place and to further explore diversity among mothers belonging to different social and economic groups. Living in homes that are in states of disrepair may significantly affect the safety risks that young children face, and thus a more detailed analysis of the barriers and facilitators to carrying out repair work with other populations of low income mothers is needed. This is also one area where mothers did show considerable initiative and resourcefulness and further inquiry is needed into mothers' use of positive strategies as well as how effective and safe use of such strategies can be fostered. Quantitative approaches are also needed to assess how aspects such as mother-child connectedness, unequal sharing of safety responsibilities and gender-related barriers to making household modifications and repairs may affect injuries to children living in low-income households. Future studies should also include data collection from fathers and should address whether mothers and fathers have different perceptions of acceptable levels of risk and whether this is linked to parent-child play behaviours and other practices that may be related to child injuries.

Injury prevention practitioners should recognize that complex gender relations may affect mothers' abilities to undertake safety related work and that prevention strategies should be developed to address these disadvantages. Furthermore, implications for practice include the

need to find ways to better support and empower women to communicate their safety concerns to partners or to landlords. Policy supports to improve the sharing of responsibility for child safety and for facilitating the ease of home repairs for mothers are also needed.

There were also several themes identified in this gender based analysis that supported ideas of how safety-related mothering experiences reflected mothers' experiences of safeguarding children as a gendered process, but also appeared to contribute to the production of women's gendered sense of self and their self-identities as mothers. The close links between mothers' daily safeguarding efforts and other child care tasks and the incorporation of these practices into a gendered identity as a *caring and concerned* mother appeared to reinforce the continuation of safeguarding work along traditional gender divisions. The current study supports this argument by providing some evidence that the women's gendered identities as *caring and concerned* mothers were constructed through their ongoing efforts to protect their child's safety in the present as well as for the future. Mothers' beliefs that they were contributing to their children's development into "safe" people who would make good decisions contributed to their own satisfaction in their mothering roles and sense of accomplishment. This finding is similar to McMahon's (1995) findings that women described their mothering experiences as personal accomplishments in which their self-identities were highly invested. Although there has not been any previous research in the injury prevention literature on how women's self-identity as mothers is related to their safety attitudes and behaviours, there have been conflicting findings regarding the value and salience that injury prevention issues hold for mothers and the degree to which they feel personally responsible for their children's safety (Bennett Murphy, 2001; Combes, 1991; Morrongiello & Dayler, 1996; Sparks, Craven & Worth, 1994;). Thus, further research is need to confirm the findings of this study regarding women's sense of identity as mothers and how this relates to their child safety attitudes and practices as well as the degree to

which this may vary among mothers. Additional qualitative work would be well-suited to study these issues in mothers who are living in a variety of living conditions and social situations.

The themes relating to mothers' sense of self also suggests directions for injury prevention practice. Firstly, there is a need for injury prevention approaches to reflect women-centred approaches that would value the positive abilities of mothers to keep their children safe and to avoid negative approaches that focus on deficits. Such negative approaches may potentially threaten mothers' sense of themselves as caring and concerned, and may exacerbate tendencies to avoid contacts with people or programs where they may feel they could be scrutinized. Women-centered approaches would be well-suited to address these issues because many elements of women-centered care are consistent with the gender-related needs and barriers identified in these research findings. For example, women-centered approaches to care have been conceptualized in the literature as care that recognizes gender differences in women's health experiences; that values women's own definitions of their health issues as well the diversity of their experiences, that supports women's values of caring as well as the empowerment of women; and that works to change the contexts of women's health issues (Hills & Mullet, 2002).

Implications of the findings for injury prevention practice also suggest a need for the development of community level strategies that could help to foster trustful relationships between low-income mothers and other mothers as well as within the community at large, including health and social services providers. In terms of needed policy supports, efforts should be made to improve childcare options that are available for low-income women with children to offset potential isolation. Home visiting programs for mothers of infants and toddlers have also shown promise in reducing child injuries among those living in disadvantaged conditions and may offer a promising approach to provide support and assistance with safety as well as other parenting issues (Roberts & Pless, 1995).

Mothers are often the targets of injury prevention interventions for the reason that they do provide the majority of care for young children in the home. Assumptions implicit within injury prevention messaging include that women have adequate access to and control over household resources to carry out recommended safety actions. This study highlighted how many of the women were disadvantaged in terms of having adequate money, time, and decision-making authority over space and objects for safety related work. Many of the mothers were also seriously hindered in their access to skills and money to make safety-related repairs in the household.

This analysis of women's descriptions of their experiences as mothers of young children has shown how their safety-related mothering practices reflected both a gendered process (in which safety practices were embedded with other mothering activities) and an engendering experience that contributed to their sense of a gendered identity as mothers. Using a gender-based analytic approach for this analysis was found to be very useful because it allowed for the development of a fuller understanding of the gendered nature of women's child safeguarding experiences, but also revealed some the variations within those experiences. This differs from a non-gender analytic approach that only considers differences between women and men in a broad sense and does not examine the range of experience that is associated with each gender category. The approach used in this study also provides an important contribution to the literature since there has been a recent focus in the injury prevention literature on "parents" which implies a neutrality and equality of experience and responsibility. Applying research questions to "parents" overall may result in gender differences being overlooked. This is an issue that has received little attention and is potentially an important factor to consider in the design of effective interventions. It may be that the previous lack of consistent findings regarding effective intervention approaches has been related in part to a neglect of the potential role of gendered relations in mothers' safety behaviours. Thus, woman-centred intervention

approaches offer potentially promising ways to overcome barriers to safety behaviour change that may result from gendered patterning of women's safety practices in the home environment. Such approaches could include empowerment training for mothers of young children along with safety and parenting skill development.

The findings describing the gendered aspects of mothers' safeguarding work support the need for broad-based policies for gender equity including increasing mothers' access to adequately paid jobs, affordable child care, as well as adequate and safe living spaces. Additional research is needed that further explores how gender may influence mothers' efforts to protect children from injuries in the home environment and how particular subgroups of mothers may be at greater disadvantage, such as those who are single, or do not have a have partner who shares in the responsibility for child safety. Subsequent to additional research in these areas, programs designed to take gender-related issues into account need to be developed and tested. The design and delivery of effective programs that address gendered aspects of mothers' safeguarding work as well as increased use of policies to mitigate the disadvantages faced by low-income mothers looking after young children are two elements needed to more effectively reduce injuries among children in the home environment.

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Chapter 5
New Understandings of Mothers' Safeguarding Efforts: Integrated Findings, Implications, and Conclusions

The overall purpose of this thesis was to explore and better understand the experiences of low income mothers' with protecting and promoting the safety of their young children in the home environment and to increase understanding of contextual factors influencing these efforts. The study was carried out using in-home interviews and observations with mothers who were living at or below the low-income cut-off lines in a medium sized mixed rural/urban community in southwestern British Columbia, Canada. This study utilized a qualitative approach for the design and the data analysis was conducted using three different approaches including ethnography, discourse analysis, and gender based analysis. While the theoretical perspectives guiding the analyses of data varied for each of the three approaches, there were commonalities found across the study findings.

This final chapter of the dissertation includes an integrated discussion of the findings from the three studies and outlines the main strengths and limitations of the research overall. This is followed by an overview of important implications related to injury prevention theory, research, practice and policy. The discussion of integrated findings and study implications is organized in a way that reflects an ecological perspective on the health issue of injuries among children and how contextual factors are involved at multiple levels of influence.

In recent years, there has been a growing interest in the use of ecological models as a way to conceptualize how health and health behaviours are influenced by factors that operate at multiple levels of influence (Gielen & Sleet, 2003, p. 67). Glanz, Rimer & Lewis (2002) point out how ecological perspectives can help to highlight how people interact with both physical and socio-cultural environments and outline three major levels of influence on health behaviours that include the following:

- **Intrapersonal level**: Relating to how individual cognitions (such as knowledge, attitudes and beliefs) are related to health behaviours.
- **Interpersonal level**: Relating to how those in the immediate social environment (such as family and friends) influence health behaviours.
- **Community level:** Relating to how organizational, institutional and societal influences are related to health behaviours.

In this study, data were collected at intrapersonal, interpersonal and community levels using the Glanz, Rimer and Lewis framework (2002) through interviews with mothers and researcher observations in the field. Data analyses revealed findings about mothers' perspectives on safety issues at these different levels and contextual factors were also observed by the researcher in the home environment. Highlights of complementary findings across the three analytic approaches used in this study will be discussed as they reflect issues at each of the three ecological levels.

Integration of Findings

Study findings related to issues that operated at the levels of the individual, the interpersonal and the community context are outlined below. For each of these levels, key findings from across the three analyses are presented. The ways that the findings may be related to children's injury risk are also discussed along with potential avenues for better supporting mothers' preventive efforts.

Intrapersonal Level: Mothers' Safety Related Conceptualizations and Efforts

At the intrapersonal level, the findings obtained through the use of the three different analytic approaches provided insight into mothers' individual cognitions, conceptualizations and deeper held meanings about child safety, as well as the components and nature of the work involved. The mothers participating in this study all expressed strong concern for their children and their safety. In the ethnographic analysis, the concept of *safeguarding* allowed for a broad frame of reference to situate women's explanations about how they tried to ensure the safety of their children. Women's conceptualizations of safety included concerns about children staying

safe not only physically, but also emotionally and socially. Women's concerns about the social aspects of safeguarding also emerged in the gender based analysis through the theme of *selective socializing*. This theme reflected women's explanations of how they restricted their social networks to avoid their children's exposure to people who might supervise them inadequately or expose them to harmful situations.

In the ethnographic analysis, mothers' safety efforts were conceptualized as work and this theoretical perspective allowed for a full range of behavioural efforts related to safety that mothers utilized to be revealed. Previous research has addressed the ways that mothers supervise and teach children (Gralinksi & Kopp, 1993; Morrongiello, Corbett, McCourt & Johnstone, 2006; Morrongeillo, Ondejko & Littlejohn, 2004; Pollack-Nelson & Drago, 2002) and how they modify hazards in the environment and use various safety devices (Kendrick, Watson, Mulvaney & Burton, 2005; Morrongiello et al., 2004; Santer & Stocking, 1991). This analysis, however, revealed new insights about the importance of mothers' cognitive work in appraising a range of a safety risks to children, emotional work to address child safety-related worries and stresses, and efforts mothers engaged in to communicate and negotiate with other people about child safety issues.

The ethnography also highlighted how mothers engaged in child-directed work such as teaching, supervising, and intervening with children as well as balancing child needs for safety with those for independent activity. These aspects of the child-directed work were found to be embedded within everyday mothering practices. As such, these types of work were often a taken for granted activity by the women that contrasted with the all-consuming nature of the work including the need for "constant monitoring" of children that many of the women described. The gender based analysis further illuminated these contradictions through findings about how the actual components of this child-directed work remained hidden due to the close linkages with the gendered and taken for granted nature of women's work in the household. Furthermore, the

gender based analysis revealed how mothers' safety efforts contributed to their own self-identity and sense of accomplishment as mothers through their emphasis on their care and concern for their children's safety and their desire for their children to ultimately grow up into "safe" people. These findings suggest that mothers' sense of gendered identity may be fostered through child safety efforts since these types of activities are closely linked with other childcare efforts.

The analysis of the discursive strategies used by mothers to describe their children's injury and near-injury events added further insights about how women's constructions of their gendered identities were produced through their safety-related mothering practices since mothers' beliefs and attitudes may be influenced by broader social discourses. While some mothers demonstrated through their use of language the different ways that they aligned themselves with dominant discourses of being a good and safety conscious mother, others expressed resistance to safety and mothering discourses through their explanations of the difficulties and challenges they experienced. This indicated their sense of being held to unrealistic expectations that are implied in social expectations of safe mothering. However, while mothers did align themselves with notions of good mothering, they also distanced themselves from ideas about being overprotective. These tensions are similar to McMahon's (1995) description of the paradoxical nature of motherhood experiences: in that motherhood may hold "high personal value and moral worth" for women (p. 271), but that as a social role, motherhood is devalued while simultaneously holding idealized cultural meanings.

In summary, the individual, intrapersonal level findings from the ethnographic analysis allowed for improved understanding of mothers' conceptualizations about safety, as well as a comprehensive description of the components and nature of women's safety-related work. The gendered analysis added further insights about how this work was inextricably linked to women's gendered identities and practices as mothers. Further, the analysis of women's

discursive strategies revealed how their use of language reflected tensions between social discourses about good and safe mothering practices.

The Interpersonal Level: Social Contextual Factors

There were several ways that the findings from the three analytic approaches contributed new information about mothers' perspectives of how factors at the interpersonal, social level both supported and undermined their child safety efforts. The ethnographic analysis, for example, revealed how in the social sphere mothers described how they received positive and trusted support from close family such as their partners, mothers, mother-in-laws and sisters and how they relied substantially on their help. Many of the mothers, however, expressed a much greater level of mistrust towards others outside their immediate social circle such as neighbours or "other mothers." They described how this mistrust was related to their lack of confidence in others' safety practices and also to their sense that others might be socially untrustworthy, and could *report on them*. The importance of this social barrier was also highlighted in the findings from the gender based analysis that revealed how mothers felt that being able to *share responsibility* with others, particularly their partners, enhanced their safeguarding abilities while being single or having an unsupportive partner constrained them.

Another aspect of gendered relations of safeguarding that undermined opportunities for sharing child safety responsibilities with others was the use of *selective socializing*. The gender based analysis showed how mothers used this as a coping strategy to reduce threats to their sense of themselves as caring mothers. These restrictions of social ties also helped mothers avoid scrutiny and negative judgments by others which reflect gendered forms of social pressure and stigma commonly assigned to low income women with children as described by Swift (1995). Some of the mothers who were single expressed a sense of being very much alone and unsupported in their child caring work overall. Roberts & Pless (1995) point out how the children of lone mothers are at significantly higher risk of injury than non-lone mothers, and thus

the restriction of social ties through *selective socializing* may place children at risk of injury due to the sole nature of these women's responsibility for their children and their need to continually "be on." Furthermore, findings from the discourse analysis also highlighted how some mothers adhered to motherhood ideologies that constructed them as solely accountable and responsible for children's injuries and this could contribute further to restrictions in their social ties.

This study also revealed how mothers' use of informal supports was undermined by high levels of mistrust in people outside their immediate social circle. This finding is in contrast to research by Roberts, Smith & Bryce (1995) from the United Kingdom who reported how mothers utilized informal supportive social networks to aid in parenting and supervision of children. These contrasting findings may have been due to the presence of different cultural norms that may exist between communities in different countries which could affect the degree of interaction between mothers of young children. The findings from this study suggest that mothers who do not have access to family or informal support networks, and who are unable to share safety responsibilities with their partners or are single mothers, are particularly disadvantaged and isolated in their safety related efforts. This is finding is consistent with Mulvaney and Kendrick's (2006) findings that among mothers living in disadvantaged situations, those who reported high levels of stress and a lack of social support were less likely to engage in certain safety behaviours related to the safe storage of medicines and sharp objects.

The ethnographic analysis revealed that there were two additional social contextual factors, *family health issues* and *sibling interactions* that were implicated in safety issues. These two contextual factors have previously been studied very little in relation to child injuries in the home, and while these issues did not emerge as major themes in the gender based analysis, they serve as important areas of future research.

In summary, these study findings regarding issues in the interpersonal, social sphere identified high levels of social mistrust among mothers and low use of informal, non-family

supports. Additionally, mothers were found to value the assistance they received when safeguarding concerns and responsibilities were shared with partners and when they had trusted family members to turn to. New findings about sibling roles and family health also emerged.

The Interpersonal Level: Physical Contextual Factors

There were also important contextual factors related to the physical environment at the level of family and household identified across the three study analyses that were found to be related to mothers' child safety efforts. The ethnographic analysis revealed how women experienced constraints in their efforts to alter or make modifications to the physical environment to protect their children. Many of these challenges were related to women's lack of income for purchasing safety items or to make effective repairs while the gender based analysis also showed how gendered experiences of safeguarding undermined their abilities to make or facilitate changes in their homes. Some of the gendered constraints that women faced included a lack of decision-making authority over the home space and a lack of access to resources necessary to make needed safety modifications. The gendered nature of these constraints that mothers face in making safety changes in the physical environment may place children at higher risks since there is research evidence suggesting that when parents of toddlers place more emphasis on child teaching strategies than on environmental changes or supervision strategies, then injury risks for children increase (Morrongiello, Ondejko & Littlejohn, 2004). However, since mothers' safeguarding behaviours were closely linked to gendered divisions of labour in the home, these behaviours may be part of strongly entrenched gendered patterns. Therefore, prevention messages that advise women to make safety modifications to the home may be of limited success if they go against these gendered patterns of behaviour related to the division of safety-related labour in the home. The potential conflict lies in how mothers may perceive themselves as ultimately responsible for child safety, while men (fathers, landlords, male partners) are perceived to hold greater responsibility for making household repairs. Therefore, by

implicating mothers as responsible for keeping children safe, injury prevention messages may not be effective if mothers are constrained in their ability to act on those messages, especially if household responsibilities are gendered and if parents hold different beliefs about the importance of preventing children's injuries. Thus, gendered constraints may affect women's abilities to make free choices about how safety changes are enacted in the home environment. This idea is supported indirectly by research examining low-income mothers' safety behaviours in the home in which mothers' self-efficacy was found to strongly predict their use of safety behaviours in the home (Russell and Champion, 1996). This finding may be related to gendered divisions in parental safety practices in that mothers with higher levels of self-efficacy may also have greater confidence about making safety changes if they perceive that their partners' levels of value and support for safety modifications are consistent with their own.

Another important finding identified across the three analyses was the inter-relatedness of issues in the social context with those in the physical context. Injury researchers have described how the environment plays an important role in the causation of injuries and how the environment is a "complex interaction of physical, social, economic, cultural, and demographic features (Peek-Asa & Zwerling, 2003, p. 77)." Less attention, however, has been paid to how different aspects of the environment may interact. For example, while research has addressed the relationships of home injuries to the physical conditions of the home (Gielen, Wilson, Faden, Wissow & Harvilchuck, 1995; Glik, Greaves, Kronenfeld & Jackson, 1993) and to housing type (Newcombe, Lyons, Jones & Patterson, 2005), there has been little focus on how housing conditions and social factors may interrelate and potentially contribute to injuries. Thus, the findings of this research add to our understandings about how mothers' safety interactions with the physical environment may also be related to the nature of the interpersonal, gendered relations at the household level.

To summarize, the findings revealed how important factors related to the physical environment played out at the intrapersonal level of the household. These issues included the presence of hazards in the indoor and outdoor home space as well as significant challenges that that women faced in making environmental changes that were related to financial disadvantage and gendered relations. Safety related factors in the physical environment were also found to be closely connected to issues in the social environment of the household.

The Community Level: Social and Physical Contextual Factors

Findings from the three analyses also highlighted how contextual factors at the community level were described by mothers in ways that showed linkages to their safeguarding efforts and reflected contextual factors related to both the social and the physical environment.

In relation to the social context at the community level, the discourse analysis addressed how multiple and sometimes conflicting social discourses were internalized by mothers and revealed in their use of language to describe children's injuries. The ethnography also revealed how some mothers believed that the problem of people *reporting on* each other to social services was particularly common in their community. Finally, findings from the gender based analysis showed how some mothers believed that their low-income status was associated with a negative social stigma that was believed by some to be very prevalent their community. Mothers' beliefs about these negative attitudes contributed to their desire to restrict their social interactions and use caution in forming friendships with other mothers. This finding of restricted social ties contrasted to a degree with findings from the ethnographic analysis that revealed how many of the mothers perceived there to be several specific support services offered in their community that they trusted and felt they could turn to for support and assistance with parenting and child care provision. One church-based program, for example, provided lunch and drop-in child care for single mothers which were highly thought of by the women who used the services. The

positive benefits of these services supported women's mothering efforts in general, and some also offered some information and education related to child care issues.

Factors related to the physical environment that were identified through the ethnographic analysis included the following: traffic hazards that were associated with the close proximity of parking and roadways; a lack of pedestrian friendly walking routes; a lack of access to convenient outdoor play spaces; and hazards from speeding traffic. For many families, particularly for those who were headed by single women, access to quality and safe housing in safer neighbourhoods was limited to a large degree by their financial status.

The findings from the three analyses also suggested that there were interconnections between contextual factors at different levels and that the negative effect of factors at one level could be further exacerbated by factors at another level. For instance, it was identified through the ethnography how small living spaces with little available play space provided challenges for mothers' safeguarding efforts. In addition, mothers also spoke of a lack of easy and safe access to outdoor play areas in the community, and that pedestrian routes to play areas were often hazardous. Thus, community level factors could be seen as amplifying the negative effects of household level factors since mothers tended stay more indoors at home. These factors combined with the findings from the gender based analysis that mothers were the main providers of continual child monitoring in the home making this an ongoing challenge for many mothers to meet their children's needs for play and safety. Mothers spoke of staying home and indoors more than they wanted to. It can be hypothesized that this may be one potential route leading to increased levels of depression or mental health strain among low-income mothers of young children which, in turn, have been shown to be risk factors associated with higher levels of injury among children (Roberts & Pless, 1995).

In summary, social and physical community level factors that were found to play a role in mothers' safety efforts across the analyses included the presence of traffic-related hazards,

women's perceptions that high levels of social stigma existed in the community against low-income mothers, and perceptions that there were some trustworthy and supportive services available to assist economically disadvantaged mothers with their safeguarding efforts.

Study Strengths and Limitations

This following section provides an overview of the main strengths and limitations related to the overall study. One of the main strengths was the use of an interdisciplinary approach for the research and this will be further discussed. Additional strengths and limitations relating to the data collection and analysis methods are also summarized.

This dissertation research provides an example of how an interdisciplinary approach can be used to develop fuller understandings of complex health related problems such as injuries among young children living in disadvantaged situations.

The approach used in this study reflects one way that interdisciplinary research can be undertaken. The dissertation research is based on a broad conceptual model reflecting a socio-ecological approach to understanding the public health problem of injury among children living in lower income households. Within this broad framework, social determinants of health such as gender and poverty are seen as influencing the safety behaviours of mothers as the primary caregivers of young children in the home environment. To address issues in the broader social context such as gender and poverty, linkages were made between the traditional public health approaches that have been primarily used to study injury prevention problems (including epidemiological, health promotion and psychological approaches) and critical social perspectives (from sociology, women's studies, and socio-linguistics) that allowed for exploration of factors related to mothers' child safety related behaviors which had received very little attention previously.

There were several ways that this interdisciplinary integration was achieved. Firstly, the research direction for this study was developed following an initial summary of the literature on parental safety behaviors using systematic review methodology, which is an established method of comprehensively assessing the relevant literature for a particular health care issue (Khan, Kunz, Kleijnen & Antes, 2003). Following this summary of the key literature, critical social theories, for example, Smith's theory of social relations, were drawn upon for analytic approaches that allowed for new and expanded ways of thinking about barriers or supports for mothers' safety behaviors. Secondly, the methods used for study design and analysis reflected qualitative methodologies that have been rarely applied in previous studies of the public health problem of childhood injury prevention. Thirdly, interdisciplinary linkages were made in the analysis and interpretation stages of the research by engaging in reflection about how the emerging findings and themes were tied to the problem of children's safety. For example, findings using gendered perspectives on how mothers experienced constraints in making modifications to the household were interpreted in relation to the role this might play in increasing the injury risks for children in the home. Thus, insights gained from new theoretical perspectives were linked back to the core public health problem of children's injury risks and the current research knowledge base about parental safety behaviours. This research, therefore, exemplifies one way that a mainly quantitative public health disciplinary area (injury prevention) can be linked with other disciplinary perspectives (critical social theories) to gain new insights and understandings about the potential roles of gender, poverty and other contextual factors that may play important roles in shaping the safety behaviours of mothers and influencing the occurrence of injuries among young children.

An additional strength of this study was that the overall approach included analysis of the data using three different theoretical lenses to study the problem of how women protect children from injuries in the home environment. Thus, complementary findings identified across these

three theoretical approaches to analysis enhanced the credibility of the results. Furthermore, through the use of qualitative data collection and approaches that privileged mothers' daily safeguarding experiences, low-income women were given a voice in expressing the challenges and issues that they faced in the daily care of their children.

The data collection methods used also added to the strengths of this study. Firstly, home visits provided an additional data source by allowing for the collection of observational data along with the interview data. Secondly, emerging findings were validated with participants interviewed later on in the study. A third study strength lay in the way that the majority of women interviewed in this study were willing to share their experiences with the interviewer and provided in many cases, rich and detailed information despite the potentially sensitive nature of the questions about their abilities to keep their children safe. Fourthly, the transferability of the findings from this study was enhanced by the use of thick description as well as by purposive sampling of mothers for the study. Therefore, the findings of the study were strengthened by the ways data were collected and by the use of varied theoretical perspectives and analytic approaches. The results also provide a contribution to women's health research by highlighting the experiences and voices of women themselves regarding their child safety work and the challenges they faced.

There were several limitations that were related to the methods and design of the study. Limitations related to the study methods including the recruitment of participants, data collection methods and the nature of the interview questions. The women who participated in this study had either been in a separate child safety study or belonged to a parent support program in the community and thus may have been more motivated than other mothers in the community. Furthermore, using in-person interviews may have led to a social desirability bias on the part of mothers to provide answers that they felt the interviewer wanted to hear about their level of safety effort in the home. Efforts to counteract this possibility and increase trustworthiness in

the data were made by including observations of the home environment and of mother-child safety interactions during the home visits. In addition, an empathetic and non-judgmental approach was used in interviews, and multiple contacts with participants were used to build rapport.

The nature of the interview questions themselves may have also been threatening for some of the women, especially those who had had previous contact with social services agencies. Moreover, as part of the consent procedures, women were informed that if during data collection, the researcher suspected that a child was experiencing abuse, then the researcher would be obligated to report this. While there were no participants who voiced being concerned about this part of the consent procedure, this may have affected the depth to which women were willing to describe circumstances that had placed their child in danger. Thus, while I strove to maintain an open and non-judgmental interviewer style, I was cognizant that some women may have not felt comfortable fully disclosing all injury events or safety-related issues that their children had faced, for fear they could be interpreted as being associated with an abusive or neglectful situation. Despite the possibility that under-reporting of injury events or over-reporting of the use of preventive safety behaviours was taking place, there were, nevertheless, many instances of injury or close call events described by mothers. Overall, the descriptions that women provided about their safeguarding efforts provided a picture of how difficult this work was for them and the many constraints and difficulties they faced doing it.

Implications of Study Findings

In this next section, implications of the integrated study findings are discussed in relation to directions for future injury prevention theory development and research as well as potential applications for practice and policy. This discussion of implications is organized to reflect findings that were identified at individual, interpersonal and community levels.

Implications from Intrapersonal Level Findings

The findings at the intrapersonal level of individual mothers reflected how women utilized broad conceptualizations of child safety and how their safeguarding work reflected an extensive range of effort. Mothers' safety efforts were found to be closely linked to other gendered mothering practices such as child care tasks. Furthermore, their use of language showed how different social discourses about safety and motherhood created tensions and conflicting attitudes about their roles as mothers in protecting children from injuries.

The intrapersonal level findings identified in this research contribute to the development of descriptive theory regarding the different components of mothers' safeguarding efforts and the nature of contextual influences on these efforts. New theoretical knowledge has also been added to the area of gendered mothering practices which previously has not addressed child safety aspects. These contributions suggest that the use of critical social theory is a valuable way to develop additional understandings about mothering and child safety and further insights may be gained through the continuing development of theory in this area.

The findings also suggest several avenues for future research on mother's attitudes and practices related to child safeguarding. The findings revealed how mothers' expanded safety efforts included balancing child needs, as well as negotiating and communicating about child safety issues with others. While it is known that environmental modifications and close supervision are related to lowered injuries in children, it is not known how mothers' abilities to successfully negotiate and communicate with others about needed household modifications and child supervision may contribute to these associations. Thus, the relationships between mothers' abilities to carry out these types of expanded safety work and the protection of children from injury needs further study. Research is also needed that addresses how mothers' adherence or resistance to social discourses and dominant ideology regarding safety and motherhood issues may either protect children from or contribute to increased risks of injury.

Implications for injury prevention practice that reflect these individual level findings include the need to develop prevention messages that are congruent with mothers' conceptualizations and meanings about child safety. Those designing such messages should also be cognizant of how different social discourses related to safety and mothering may affect women's attitudes towards safety and avoid assuming that injury attitudes will be similar between mothers. As well, individual mothers may hold attitudes that may at times conflict, such as valuing their children's needs for protection, but also valuing their engagement in activities that may at times expose them to some level of risk. Thus, injury prevention messages should also acknowledge and support mothers' efforts to balance the protection of their children with fostering their needs to learning and play.

Injury prevention practitioners should also recognize how mothers' efforts may extend beyond child directed work and household modification to work that includes negotiating and communicating with others. One way to recognize this in practice is to aim messages at all people who are potentially caring for children, to help with sharing of responsibility for ensuring children's safety. Practitioners should also recognize the gendered nature of safeguarding experiences and promote intervention strategies that are women centered, that include messages that are congruent with gendered experiences and that include empowerment strategies. Women centered approaches that recognize mothers' care and concern for their children's safety and are consistent with their gendered identities as mothers may provide more effective support to women than strategies that are more punitive or blaming. Moreover, prevention efforts should focus on helping women utilize child-directed safeguarding strategies such as teaching and supervision in ways that also help them to improve their knowledge and skills regarding child development and parenting practices. Such strategies would help build on women's strengths by supporting and improving upon the safety strategies that they already utilize.

At the level of individual cognitive and behavioural change among mothers, policy-related efforts are needed that address the needs of mothers and acknowledge potential constraints that may affect safeguarding efforts. Policies at the level of health authorities can be developed that support programs and services that directly provide aid and support for mothers to facilitate, support and empower their safeguarding efforts in ways that acknowledge the gender and income related constraints that mothers of young children may face.

Implications from Interpersonal Level Findings

Mothers in this study were found to value highly the support they received from family for safeguarding and the sharing of responsibility for child safety with their partners. They also described a high level of social mistrust of others in their less immediate social networks and a low use of informal supports to help with safeguarding, such as supervising children. Mothers were also found to face significant challenges in making safety alterations to their home physical environments and these difficulties were found to be related to their gendered social relations and to their disadvantaged financial situations.

At the interpersonal level, this study contributes to the development of theory about how gendered social relations in the household are linked to mothers' safety efforts. Use of these theories led to findings about the diminished power that some of the mothers experienced in their efforts to make safety improvements in the home environment. Gender related theories provide an important area where further theoretical work can be developed.

There are several research questions that arise from findings that were related to the immediate social context in which mothers and children lived and how these factors might influence children's risks. For example: What is the relationship between the level of sharing of concerns and responsibilities for safeguarding between partners and children's exposure to safety risks in the home? A related question addressing the physical environment is: How does the gendered use of and control over space impact mothers' safety efforts and affect children's

injuries? Also needed is an examination of strategies that could be used to help empower women to address needed safety changes in the physical space in the home in situations where they may lack decision-making authority over the use of space. Examining the effects of social mistrust and lack of informal supports on mothers' safeguarding work, how these effects might impact children's injury risks, and how they can be mitigated would be another useful avenue of research. Finally, it would be helpful to use qualitative approaches to further explore the ways that sibling interactions and family health issues may be related to mothers' safeguarding efforts and whether these issues reflect gendered aspects.

There are several implications for practice that can be identified at the interpersonal, household level. Firstly, it is important that injury prevention messaging be directed to fathers and others caring for children as well as to mothers. It is also important for program planners to be aware that parental safety concerns and responsibilities may be gendered and not equally shared by mother and fathers. Furthermore, program planners need to consider how gendered divisions may affect mothers' abilities take up safety messages that are related to gendered domains in the house such as repair work which they may not have the authority or resources to carry out. Therefore, there is a need for women-centered programming approaches that include empowerment and communication skills training to help women develop skills to voice their needs and concerns about issues that affect their children's safety.

Policy supports to foster more trustful relationships between mothers and others in their social networks can be enhanced by the development of policies by health and child welfare authorities that aim to balance the mothers' needs for assistance with safeguarding with the needs to monitor families for situations that potentially involve abuse. Thus, the needs of children for protection should be balanced with approaches that enable mothers to seek help with safeguarding in ways that minimizes fears that their parenting skills will be unfairly scrutinized.

Policy supports that aim to enhance mothers' abilities to successfully negotiate and make home safety modifications and repairs are also needed. Policy makers at municipal and health authority levels should give priority to listening to the concerns of everyone in the community, to finding effective ways to include mothers with small children in these discussions, and to carefully consider the implications of policy decisions on child safety.

Implications from Community Level Findings

The social and physical community level factors that were identified in this study were related to the influence of social discourses, social networks and resources, and physical hazards in women's homes and communities. This study has also contributed to theory building at the community level. The discourse analysis, for example, contributed to theory about how various social discourses regarding motherhood, child safety and preventing injury might affect social norms in the community and this is another important area for further theoretical work.

Many of the study findings reflected mothers' perceptions of community level factors that they considered important to their safety related efforts and these perceptions along with researcher observations about the community context provide ideas for further development of community-level injury prevention theory. It is also important to consider that at the community level, multiple jurisdictions may have an impact on mothers' child safeguarding efforts, for example, public health, social services, transportation, housing and urban planning. Thus, it is important to utilize prevention theory that can address the multi-jurisdictional nature of these issues, and that draws from community development and organizing theories in addition to more traditional, public health injury prevention theory. Community level theories such as empowerment theory, community-capacity building and community-based participatory research approaches also hold promise as ways to engage community members in the design, conduct and evaluation of child safety intervention efforts.

There are several research questions that arose from these community level findings. These questions include: How can trustful relationships be built among community members to foster the establishment of positive social ties among those caring for young children? Secondly, how can community programs be designed to enhance mothers' safety efforts, address the contextual constraints they face, and offer services that mothers' find trustworthy and supportive? Research efforts could include a community scan to ascertain the amount of child safety related content contained in community programs and the extent to which this content addresses contextual issues that may affect low income mothers.

Injury prevention programming efforts should also target the further development of community supports for mothers of young children and should tailor these programs to the needs of low-income women. These strategies may include access to low-cost safety supplies, child safety education, as well as general supports such as parenting classes and increased opportunities for low-cost drop-in child care. Injury prevention programs should also help to empower disadvantaged women to voice their concerns about children's safety issues in order to facilitate safety improvements in the community that reflect their concerns and issues relevant to their local situations.

Furthermore, ecological approaches should also be applied to the planning of comprehensive, community-based injury prevention programs and although these approaches have been used minimally in the field to date, attention to these approaches has grown in recent years (Allegrante, Marks, & Hanson, 2006; Gielen & Sleet, 2003). Efforts to plan and evaluate community safety programs can make use of ecologically based intervention planning frameworks, such as the PRECEDE PROCEED Model (Green & Kreuter, 2005).

Policy-related implications at the community level include the need for macro-social strategies that operate at municipal, provincial and federal levels to improve safe and affordable housing options for families with young children. Municipal level policies are also needed to

support the availability of safe and accessible play areas and reductions in traffic hazards in the community. Intersectoral policy and actions may also be necessary to address injury issues that cross jurisdictions. There is also a strong need for improvement in the financial support available for disadvantaged mothers of young children, especially in the form of policies to increase the availability of affordable child care and access to flexible employment opportunities that could help reduce the financially related constraints on their child safety efforts.

Conclusions

In summary, this research has shown how mothers in this study, who were living in low income situations, expended considerable efforts to safeguard their young children and that these efforts were closely associated with their gendered roles in the home. The study also provided new insights about how tensions existed in the ways that mothers constructed meanings about child injuries, and how a variety of contextual factors at different levels shaped their safeguarding work.

This study contributes to knowledge about the child safeguarding efforts of mothers living in low income situations in a number of ways. There were key findings that emerged from each of three sub-analyses conducted. From the ethnographic analysis, it was found that mothers' safeguarding work consisted of four types of work, some of which had not been previously considered in the literature, such as work directed at the social environment and balancing children's needs for safety with those for play and exploration. These results also provided new insights about the range and scope of mothers' safety efforts and illuminated how a variety of factors at intrapersonal, interpersonal, and community levels were involved in shaping these efforts. The gender based analysis added further insights about how mothers' safety work was closely linked to other mothering activities and how gendered relations in the

home environment affected women's safety efforts. Finally, the discourse analysis helped to uncover socially constructed meanings that mothers held about child safety and motherhood. This analysis showed how mothers used a variety of discursive strategies to explain their children's injury and near injury events and that these showed both adherence and resistance to dominant discourses about motherhood and safety.

This research also contributed to theory development in several ways. Firstly, the use of an interdisciplinary approach expanded the theoretical perspective for understanding mothers' safety efforts by combining an ecological public health perspective on injury prevention with the use of critical social theories to underpin the analyses. This is an important contribution since social science theories have rarely been utilized in injury prevention research (Di Clemente, Gielen & Sleet, 2006). The ethnographic analysis provided a rich, descriptive account of mothers' safeguarding work and furthered theoretical development about the nature of this work and how it was affected by different contextual factors. Findings from the gender based analysis contributed to descriptive theory about how child safeguarding and mothering practices are related while the discourse analysis contributed to descriptive theory about how socially held meanings regarding safety and mothering are reflected in everyday language.

These findings provide important information about a subgroup of women who experience economic disadvantage, which is an under-researched area and has received little study in relation to child safety issues. By way of qualitative methods and through the use of in-depth interviews and observations, the findings also highlight women's own perspectives about their children's safety issues. Study findings were also strengthened through the use of three different analytic approaches.

This new knowledge about mothers' child safety efforts and the contextual factors involved contributes to the knowledge base needed for injury prevention practitioners to develop programming and policies that can help to address the constraints faced by low-income women.

The development of effective programs and policies are important areas for future work so that mothers can be better supported in ways that maximize their ability to protect their children from injuries and harm in the home environment.

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Appendix 1
Childhood Home Injury Prevention Intervention Review Studies

Review	Target Population and Setting	Designs Included	Review Methods and Checklist Rating	Intervention/ Outcomes Assessed	Main Results & Conclusions
Spinks, Turner, McClure & Nixon (2004). 9 studies included: (Schlesinger/66; Guyer/89; Davidson/94; Svanstrom/95; Petridou/97; Coggan/2000; Lindqvist/02; Jeffs/93; Tamburro/02)	Children under 14 years as targets of community-based intervention studies. Community-based, all-cause child injury prevention programs.	Community controls or historical controls used.	Systematic review methods used. Score on Oxman checklist 8/11	**Intervention:** Community-based interventions applying more than a single strategy to a whole community or group. **Outcomes:** Injury rates from all causes.	In 3 of 7 studies that used a community control, there were reductions in injury rates found. **Conclusions:** There were insufficient studies and variation in results to provide definitive evidence of the effectiveness of community-based programs.
Lyons, Sander, Weightman, Patterson, Jones, Lannon, Rolfe, Kemp & Johansen (2005). 11 childhood studies included: (Kelly/87; Kendrick/99; King/01; Clamp/98; Colver/82; Dershewitz/79; Gielen/02; Paul/94; Thomas/84; Waller/93)	People of all ages with separate analyses of results for children. Setting included home and health care settings.	RCT's; non-randomized controlled trials, controlled before-after studies; and interrupted time series studies.	Cochrane review methods used. Score on Oxman checklist 8/11	**Intervention:** Variety of intervention to reduce physical hazards in the home environment. **Outcomes:** Injury rates, prevalence of safety features, prevalence of hazards.	Seven of the nine studies assessing hazard reduction showed some reductions in hazards. None of the 11 childhood studies demonstrated a decrease in injuries. **Conclusions:** Review reached no definitive conclusions whether amelioration of hazards in the homes will reduce injuries for children.
Close (2002). 2 studies included: (Kelly/87; Kendrick/99)	Parents or carers of children under 5 years. Educational programs in primary care settings.	2 RCT's (including cluster randomized trials)	"Mini-review" based on Griffiths (2002) using systematic review methods. Score on Oxman checklist 7/11	**Intervention:** Education in primary care setting, with aim of reducing child accidents in the home, delivered by individual practitioner, may be combined with other strategies e.g. safety equipment. **Outcomes:** Home accident or injury rate as outcome (excluded knowledge or practices).	Two studies met the criteria. **Conclusions**: No effect of preventive interventions on injuries compared to standard services in primary care. (Kelly study did not have enough power to detect differences and Kendrick not powerful enough to detect impact on major injuries).

Review	Target Population and Setting	Designs Included	Review Methods and Checklist Rating	Intervention/ Outcomes Assessed	Main Results & Conclusions
DiGuiseppi & Roberts (2000). Reviewed 22 rcts, 5 for general childproofing interventions. (Kelly/87; Clamp/98; Kendrick/99; Dershewitz/77; Woolf/87)	Children ages 0-19 or their families. Interventions delivered in clinical settings.	5 RCTs	Cochrane Systematic review methods – Score on Oxman checklist 7/11	Interventions: Clinical interventions delivered in primary or acute care. Outcomes: Injury occurrence, safety behaviours.	No decreased injury found across the five studies. Some safety practices did increase: smoke alarm ownership and setting safe hot water temp. Little effect found on safety practices in the 5 childproofing studies except one (Clamp) who reported positive and statistically significant differences for most outcomes.
Klassen, MacKay, Moher, Walker, & Jones (2000). Reviewed 4 studies (as part of a larger review of 32 studies) on general injury prevention: (Davidson/94;Svanstrom/95; Schesomger/97 & Sundelin/96)	Children 0-19 years (2 studies of children less than 7 years) Community-based interventions	4 NRCTs	Systematic review methods Score on Oxman checklist 7/11	Interventions: Community based programs. Outcomes: Injury rates in three of the four studies.	Results: One community-based study (Davidson) aimed at 5-16 year olds found a 50% decrease in injuries among intervention group. Conclusion: Community-based programs using multiple strategies and grounded in behaviour change theory show most success.
Dowswell, Towner, Simpson, & Jarvis (1996), Towner, Dowswell & Jarvis (2001); Dowswell & Towner (2002). 1996 review included 45 studies related injury in home environment, 2001 study identified 4 additional studies, 2002 review included 8 studies that addressed social disadvantage.	Children 0-14 years All settings.	Not reported in detail (20% RCTs) in 1996 review.	Systematic review methods Score on Oxman checklist 8/11	Interventions: Educational, environmental modification, and legislative interventions across several areas: road safety, home environment, leisure environment. Outcome: Behavioural changes and injury reductions.	General home safety campaigns have resulted in increased knowledge, some behaviour change, little evidence of injury reductions. Conclusions: Single focus campaigns more successful; combined intervention approaches most successful (legislation, education & environmental change). Studies of socially disadvantaged groups reported reasonable to good evidence of safety behaviour change among parents, but no evidence of injury changes were found.
Roberts, Kramers & Suissa (1996). Reviewed 8 rct's. (Infant health and development program/95; Marcenko/94; Johnson/94; Barth/91; Dawson/89; Hardy/89; Olds/86; Lealman/83; Larson/80; Siegel/80; Gray/79).	Prenatal home visiting programs in community settings.	8 RCTs.	Systematic review methods. Score on Oxman checklist 9/11	Interventions: Post-natal home visits by lay or professional visitor. Outcomes: Injury reduction (and child abuse reduction).	Results: Pooled odds ratio for 8 trials measuring home visiting was 0.74 (95% CI: .60-.92) (For first year life pooled odds ratio .98) Conclusions: Home visiting programmes have potential to reduce significantly the rates of childhood injury.

Appendix 2
Summary of Reviews – Oxman Review Criteria

Review Criteria	Lyons, Sander, Weightman et al., (2005). Title: Modification of the home environment for the reduction of injuries.	Spinks, Turner, McClure & Nixon, (2004). Title: Community-based prevention programs targeting all injuries for children.	Close, (2002). Title: Does accident prevention education reduce the incidence of childhood accidents in the home?	DiGuiseppi & Roberts, (2000). Title: Individual-level injury prevention strategies in the clinical setting.	Klassen, MacKay, Moher, Walker, & Jones, (2000). Title: Community-based injury prevention interventions.	Dowswell, Towner, Simpson, & Jarvis (1996), Towner, Dowswell & Jarvis (2001); Dowswell & Towner (2002). Title: Preventing childhood unintentional injuries – what works? A literature review.	Roberts, Kramer & Suissa, (1996). Title: Does home visiting prevent childhood injury? A systematic review of randomized controlled trials.
Question clearly focused?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Search thorough?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inclusion criteria appropriate?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Validity of studies adequately assessed?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Missing data obtained?	Not reported	Not reported	No	No	No	No	Yes
Sensitivity of results? (sensitivity analyses)	No	No	No	No	No	No	No
Do conclusions flow from the evidence that is reviewed?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are recommendations linked to the strength of the evidence?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are judgements about values explicit?	Yes	Yes	No	No	No	Yes	Yes
No evidence of effect – caution to not interpret as "evidence of no effect"	Yes	Yes	Yes	Yes	Yes	Yes	No
Are subgroup analyses interpreted cautiously?	n/a	n/a	n/a	n/a	n/a	n/a	Yes
Score	8/11	8/11	7/11	7/11	7/11	8/11	9/11

Checklist from: Oxman, A. (1994). Checklists for review articles. BMJ. (309),648-51.

Appendix 3
Additional Child Home Injury Prevention Controlled Intervention Studies

Study	Target Population and Setting	Design	Methods	Intervention/ Outcome Measures	Main Results & Conclusions	Study Limitations
King et al. (2005) (Canada) **Long term effects of a home visit to prevent childhood injury: three year follow up of a randomized trial.**	Children under 8 years, (n=1172) multi-center trial at 5 hospitals in 4 Canadian urban centres participated in original study. In follow-up study, telephone survey was conducted with 774 original participants (63%).	RCT Jadad scale score = (2.5/5 for original study). For 2005 study: Subjects who were originally enrolled in a case control study were subsequently randomized. RA collecting follow-up data was blinded to intervention assignment.	Theory use – not reported Tools – tool development not reported; nor any reliability or validity measures.	**Intervention:** Single home visit, information package, coupons and safety instruction. **Outcome measures:** Injury knowledge and practices; self-reported injury visits to doctor.	Doctor visits: Rate of reported injury visits to the doctor was 0.20 per patient year for the intervention group and 0.27 per patient year for the control group. This rate was significantly less for the intervention group (rate ratio: 0.74, 95% CI = 0.63 – 0.87). This was consistent with results found at 12 months although the effect waned. Intervention with single home visit did not influence adoptions of home safety measures, but did decrease overall occurrence of injuries (in original study). In follow-up study, specific safety measures did not appear to have been assessed.	Large age range of subjects makes the developmental appropriateness of the some of the outcome measures questionable (e.g. Use of stair gates). In the follow-up, parental uptake of specific safety behaviors are not presented. Little information provided on the SES/income levels of sample.

Watson et al., (2004). (UK) **Providing child safety equipment to prevent injuries: a randomized controlled trial.**	Families with children under 5 years (n=3428) and living in deprived areas were enrolled in home visiting study conducted out of 47 general practices.	RCT Participants were stratified by health visitor and randomized in blocks of eight to the two treatment arms. Allocation was blind as was outcome assessment.	Theory use – not reported.	**Intervention:** Health visitor safety consultation and provision of free and fitted safety equipment. **Outcome measures:** Primary outcomes included injury requiring medical attention, rates of attendance in primary and secondary care, and rates of hospitalization. Secondary outcome measures included possession of safety equipment and safety practices.	No significant differences were found in families having child with medically attended injury; or in rates of attendance in secondary care; or admission to hospital. However, those in intervention arm had higher rates of attendance in primary care for injuries (1.37, 1.11 to 1.70, p=0.003). At one and two years, intervention families were more likely to have a range of safety practices (9 behaviors were assessed), but differences between groups were quite small.	32% of the intervention arm families did not receive the safety consultation and only 38% received the safety equipment. Compliance analysis did show similar injury rates between families who received equipment and those who didn't. Conclusion: the increased possession of and use of safety equipment among families in intervention arm did not translate into a lower injury rate. The authors offer several potential reasons as to why this is the case as well as reasons as to why there was a higher level of primary care attendance among the intervention arm.
Posner et al., (2004). (USA) **A randomized, clinical trial of a home safety intervention based in an emergency department settings.**	Caregivers of children under 5 years who attended an urban pediatric emergency department (n=96).	RCT: staff randomly assigned participants to study arms using a series of envelopes that were pre-numbered and randomized in blocks of 10. Staff were blinded to allocation.	Theory use – "teachable moment" & Health Belief Model.	**Intervention:** Caregivers received either a comprehensive home safety education and free safety devices or injury specific instructions. **Outcome measures:** After two months, safety scores were assessed by telephone. Main outcome = degree of improvement in safety practices.	Intervention group showed a sig. higher overall safety scores at follow up than the control group (73.3% vs. 66.8%) and significant improvements in poison, cut and burn category scores. Intervention group also reported greater use of safety devices. Injury outcomes were not assessed.	The intervention was effective in improving the home safety practices of caregivers of young children; the effect on injuries was not assessed. Authors suggest ED visit can be used effectively to disseminate injury prevention information.

Sznajder et al., (2003). (France) **Home delivery of an injury prevention kit for children in four French cities: a controlled randomized trial.**	100 families from four towns around Paris were selected by Mother/Child Protection Services.	RCT: Families were randomized into two groups of 50, randomization procedures not described.	Theory use – not reported.	**Intervention:** Intervention group received in-home counseling, pamphlets, & a safety kit. Control group - no kit. **Outcome measures:** The number of safety improvements at 6-8 weeks after first home visit.	Between first and second visits, safety improvements were sig. higher among intervention families. Safety improvements related to the kit was RR 1.56; for improvements not related to kit items, the RR was 1.54. Injury outcomes were not assessed.	Staff delivering intervention and collecting outcome data were not blinded. Authors suggest that free delivery of safety kit plus counseling allowed families to modify behavior and reduce risks in the home.
Nansel et al., (2002). ***Baby, Be Safe*: the effect of tailored communications for pediatric injury prevention provided in a primary care setting.**	Parents of children 6-20 months were enrolled in a study delivered in a primary care setting during routine well-child visits (n=213).	RCT: participants were randomized upon entry to computer system located in the clinic to receive one of two treatment conditions.	Theory use – not reported.	**Intervention:** Participants received computer generated, individually tailored educational materials or generic information on child injury prevention. **Outcome measures:** Injury risk behaviors, injury prevention behaviors and psychosocial constructs.	Those in tailored group showed a decrease in overall injury risk score from baseline to follow-up than those in control group. (mean decrease in score 4.68 versus 1.54, t=-3.45, p=0.001). There were no differences found between groups for measures of injury susceptibility, injury-related locus of control, self-efficacy for injury prevention or perceived effectiveness of injury prevention devices.	Reliance on self-reported behaviors, and in some cases, insufficient time in waiting room to complete baseline assessment.

Bass et al. (1991) (USA) **Childhood injury prevention in a suburban Massachusetts Population.**	Population-based study of programming in four suburban, high income Mass. Communities.	Non-equivalent control group study: three intervention towns and one control town.	Theory base not reported. Tools: SCIPP tools (based on Framingham Safety Surveys); telephone surveys. Reliability and validity measures not reported.	**Intervention:** Physician counselling; written materials provided; free safety materials. Included perinatal, school-based and public education efforts. **Outcome measures:** Behavioural outcomes not reported in this study. Injury outcomes: injury incidence measured by hospitalization data. Home inspections in 24 homes.	The program reached 30% of the 0-5 year old population. Intervention towns had overall injury reduction of 15% and ratio of relative risks of 1.75 for control compared with intervention sites (95% CI, .95-3.19). A comprehensive strategy that includes physician counselling in the context of community education programs appears to have potential for injury reduction.	Study conducted in high income communities; results may not apply in low-income settings. Difficult to assess exposure status of injured children; and exposure to the intervention in the control community; also difficult to ascertain which program component was effective.

Appendix 4
List of Relevant Studies

Bennett Murphy, L.M. (2001). Adolescent mothers' beliefs about parenting and injury prevention: Results of a focus group. *Journal of Pediatric Health Care, 15,* 194-199.

Combes, G. (1991). *You can't watch them twenty-four hours a day.* Child Accident Prevention Trust, Health Education Authority, Health Education Board for Scotland and Northern Ireland Department of Heath and Social Services.

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Appendix 5
Summary of Study Key Elements
Relevant Studies on Parent Safety Behaviours and Related Factors

Author Year Country	Key Concepts	Targets & Setting	Design	Research Questions	Data collection methods	Outcome measures	Study findings	Study Limitations
Bennett-Murphy 2001 US	Perceived importance of injury prevention as part of mothering.	17 mothers 18 years or less with children 3 years or less.	Qualitative focus group study. Injuries were not measured.	What important things do you do as a mother? Beliefs about why injuries occur and their preventability.	Focus groups; coding and categorizing well-described.	Beliefs and attitudes towards children's injuries.	Mothers did not identify injury prevention as an important part of mothering; there was a connection between mothers' beliefs about abuse and about injury.	Participants already part of a support group.
Combes 1991 UK	Parents' and children's perceptions and views on safety.	Parents (92% mothers) of 3-6 year old children, N=112 parents of 195 children.	Qualitative action research project; group discussion held with parents.	To study the perceptions and understandings of young children and their parents; to explore how accident prevention fit with wider aspects of family life; to identify implications for health visitors.	Data collected during parent meetings in four study locations in the UK.	Analysis included description of themes, little additional info provided.	Parents saw themselves as mainly responsible for children's safety; and for teaching about safety. Issues included child development, perceived differences between children, balancing risks with supervision, and perceived benefits from risks and overprotection. Environmental issues such as housing and roads seen as factors affecting risk.	Procedures for running the group discussions provided, but little description of data analysis.

Dal Santo, Goodman, Glik & Jackson 2004 US	Key variables included: socio demographics, housing, psychosocial, cognitive, child, behavioural and unintentional injuries.	Mothers only, n= 159 children ages 6 months to 5 years in a community setting.	Longitudinal survey and in-home diaries.	3 hypotheses: 1) Did stress and social support predict injury risk? 2) Did perceived risk of injury and hazards predict risk? 3) Did low supervision and increased hazards predict injury risk?	In-home survey and completion of diaries.	Individual cognitive, behavioural and environ. variables assessed (e.g. housing). Injuries = near misses and minor injuries. Multivar. analysis.	Injury risks were found to be related to homes needing repair (risk level was 3.8 times higher). Stress and social support levels were not found to predict injury risk. Hypothesis 2 & 3 – interaction effects found.	More affluent, middle class families. 159 out of 230 participants completed diaries.
Eichelberger et al. 1990 US	Safety perceptions, knowledge, behaviours	N=404 parents with children < 13 years.	National random survey.	What are the attitudes, knowledge of parents regarding child safety?	Quant. Survey No reliability/valid. measures reported. Descriptive statistics.	Knowledge of leading injuries; attitudes; countermeasures (injury measures not reported).	Parents worried more about kidnappings and drugs (misconceptions). Safety actions – found differences related to SES and mother working. Low levels of safety behaviours were reported.	Broad age range: 13 years of age or less, therefore, actions would vary greatly.
Evans & Kohli 1997 UK	Safety practices, attitudes, beliefs, and perceptions. (knowledge)	2 random samples of parents of preschoolers (n=200 each) Community survey	Postal survey; random sample of two groups.	What is the effect of SES on safety attitudes of parents of preschoolers?	Quantitative survey Survey pilot testing reported; no reliability/valid. measures reported.	Parental perceptions of neighbourhood safety. No injury measures.	Between groups: similar safety behaviours; some significant differences were found between groups: among lower income group, there were perceptions of the neighbourhood as less safe and that there was less money available to keep kids safe.	Limited by self-report and possible non-response bias. Response rates 67% & 58%.

Garling & Garling 1995 Sweden	Anticipated and unanticipated injuries and near misses.	N=150 mothers of 1-3 year old children, 2 random samples.	Field interviews; parents kept weekly diaries.	How well do mothers anticipate injury events and near misses?	Mothers recorded anticipated and unanticipated injuries. Frequencies; anovas	Types of preventive action. Injuries: mothers recorded both anticipated and unanticipated injuries.	62% accuracy of anticipated injuries; preventive strategies shifted as the child got older and included more teaching.	Possible bias in reported anticipated injuries, with possible over-reporting. Unclear how the accuracy of anticipating injuries calculated.
Garling, Garling, Mauritzon-Sandberg 1989 Sweden	Risk perceptions and parental preventive actions	N=72 randomly selected mothers of 1-3 year olds.	In-home survey	What is the role of risk perceptions in parental preventive actions?	Instruments not clearly described. Anovas	Accident risk ratings for different rooms. Recalled accidents.	Kitchen/bathroom perceived as more dangerous, some misperceptions found for age/general risks, but other risks were accurate (falls).	High SES parents; social desirability may have played a role.
Garling & Garling 1993 Sweden	Supervision beliefs of mothers.	N=150 mothers of 1-3 year old children.	In-home interviews	How do mothers believe supervision reduces risk?	Instruments not clearly described. Anovas/manova	Number of anticipated injuries; and injury risk rating. No injury measures.	Mothers perceived lower risk of injury when they could more closely supervise; and more so if child was assisting mother than if just in same room.	Instruments not well described. Researcher defined different types of supervision.

Gielen et al. 1995 USA	Parental beliefs, barriers to safety practices, and housing quality.	N=150 mothers of 6-36 month old children. Low income sample.	Interviews with mothers attending primary care clinic.	To assess home safety practices, the role of parent beliefs, barriers, housing quality.	Number of items per variable described. Frequencies, percentages and bivariate analyses.	Practices, beliefs, attitudes, subjective norms, behavioural control, housing quality, number of moves, # people in home.	59% did not use stair gates, 27% had no smoke detectors, favourable attitudes to prevention reported, barriers included income, housing quality, frequent moves. Lower income mothers experienced more barriers.	Sample was not random. Assessed variety of barriers for low income mothers.
Glik, Kronenfeld & Jackson 1991 US	Influences on risk perceptions Self-reported safety behaviours.	N=1200 mothers of children 6 months to 5 years.	Telephone survey, random digit dialling.	What predicts variations in risk perceptions of mothers? How are risk perceptions influenced by SES, child attributes, behavioural and psychosocial factors?	Instrument development described; TIPP scale used. Some instrument testing scores provided. Multivariate analysis.	Risk perceptions Safeproof behaviours. Child injury experience.	Risk perceptions were mostly influenced by 1) previous experience w. injury; 2) child seen as difficult to manage; 3) those mothers experiencing more stress. SES not a predictor, Safe proofing behaviours did not correlate with risk perceptions (negative correlation found).	Strengths included large, random sample, strong methods including use of established measures (TIPP) and use of multi-var. analysis.
Glik, Kronenfeld & Jackson 1993 US	Maternal stress, self-reported safety behaviours.	Same as above	Same as above 85% response rate.	Which safety behaviours influenced by social, cognitive and situational variables?	TIPP – modified for behaviours, authors developed own risk perception measures. No reported measures. Multivariate analysis.	Safety behaviours – measured by modified TIPP. No injury measures	Family SES and maternal stress were negatively assoc. with safety behaviours. Risk perceptions of injury were inversely related to safety behaviours, and risk perceptions of hazards were positively assoc. with safety behaviours.	Well-conducted study with large sample size. Influence of income assessed. Middle class sample.

Glik, Greaves, Kronenfeld & Jackson. 1993 US	Maternal supervision, locus of control, maternal social support, normative safety attitudes, stress and coping scale.	N=230 mothers of children 6 months to 5 years.	In home interviews selected from larger random digit dialling survey.	What factors influence controllable in-home child safety hazards?	6 different instruments used, adapted HAPI; with some reliability and validity measures provided. Multiple regression.	3 indexes of safety hazards; poisons, falls and burns. No injury measures.	Higher hazard scores were found to be correlated with less protective supervisory style of mothers, low SES, and poor housing repair. Child related and attitudinal variables were not related to hazard levels.	Lack direct observation, low internal validity on some of the measures (burns, and falls) and no injury outcome data was assessed.
Gofin & Palti 1991 Isreal	Self-reported injuries, behaviours, and environmental risks.	N=357 mothers of 0-2 year olds.	Clinic based survey (home visits in sub-sample).	What are the injury prevention practices of mothers in the home environment?	Quantitative survey adapted from Framingham survey. No reliability/valid. measures reported. Descriptive statistics provided.	21 behaviours and 23 environmental risks (self-reported injury in past 2 weeks).	24% of mothers used all 11 safety practices assessed, 52% had 1 – 2 unsafe practices, while 24% reported 3 – 6 unsafe practices. Mothers with older children reported more unsafe practices.	Tools development explained, and observations of participant sub-samples.
Gralinski & Kopp 1993 US	Child socialization, parent-child interaction, mothers' use of requests and rules.	2 cohorts of 71 mothers followed.	Longitud. analysis using question-nnaires.	How do mothers socialize children towards self-regulation?	Checklist of behavioural requests, one of which was safety. (adapted from another source-no reliability or validity measures were reported).	Types of behavioural requests. No injury measures.	Safety was found to be a prominent issue early on, but this shifted towards family routines and self-care at later ages.	Safety behaviours were one of eight behavioural areas assessed. Item development well explained.

Greaves, Glik, Kronenfeld & Jackson. 1994 US	Observed, controllable home hazards, deficits (informational, stress and coping, parenting deficits).	N=230 mothers of children 6 months to 5 years.	In home interviews selected from larger random digit dialling survey.	1) Do mothers with lower risk perceptions of hazards live in homes with more controllable hazards? 2) Do mothers who report more stress and less social support live in homes with more hazards? 3) Do mothers with a less cautious supervisory style live in homes with more hazards? 4) Do mothers in lower SES households live in home with more hazards?	Regression analysis – re-analysis of Glik '93.	Observed hazards using a 22 item controllable hazards index developed from HAPI. No injury measures.	Higher hazards scores correlated with: SES, housing repair, maternal social support, maternal supervisory style. Parents of children > 2.5 years were found to be less vigilant.	Study was population-based, included some observational methods, and used multivariate analysis.
Hu, Wesson, Parkin & Rootman 1996 Canada	Safety knowledge, attitudes, self-reported safety behaviours, needs, and concerns.	N=1516 parents of children 0-14 years.	Random digit dial survey in two communities.	What knowledge do parents have about injuries? What kinds of attitudes do they hold and what information needs regarding injury prevention do they have?	Quantitative survey developed by the authors, reliability/validity measures were not reported. Survey was pilot tested. Descriptive statistics provided.	Self reported parent safety behaviours, beliefs and attitudes as well as parent reported injury.	Over half of parents knew that injuries leading cause; 70% believed that injuries were most preventable of health disorder.	Broad age range, self-report data.

Kendrick, Watson, Mulvaney, & Burton 2005 UK	Home safety behaviours of families.	N=2357 children aged 0-7 years from community -based sample.	Prospective study (cohort from the control arm of RCT study).	To examine the relationship between safety behaviours and childhood injuries.	Mail out of validated questionnaire, and review of medical records (hospital and primary care records).	Three types of injury measures: primary care attendance, emergency room attendance and hospital admissions. Analysis: Poisson regression.	None of the safety behaviours were associated with primary care attendance. Increased use of safety practices were associated with emergency room attendance, use of smoke alarm, safe storage of sharp objects and use of stair gate were associated with decreased emergency visits for injuries. These practices predicted AE attendance as well as poverty index.	Validated measures and large sample used. Parents participating in a randomized trial may be more motivated to engage in safety behaviours.
Kisida et al. 2001 US	Unsafe practices, supervision.	N=54 mothers with 3 year olds who had been premature at birth.	Qualitative analysis of secondary data.	To describe the incidence of unsafe parenting practices, and differences between those with safe versus unsafe practices.	Observation and self-report measures using the HOME inventory. Field notes collected for another study were analyzed.	4 types of unsafe caring practices were assessed: 1) physical hazards, inadequate supervision prolonged absence, and harmful activities.	Unsafe practices were found for 30% of 54 children. Lower HOME scores and later birth order were associated with more unsafe practices.	Poor reporting and secondary analysis of field note data collected for another study may have limited validity. Limited to mothers of premature children.

Lewis, DiLillo & Peterson, 2004 US	Parental attitudes, gender differences, developmental benefits of injury.	N=159 parents of children 5-40 months (23 families had data from mothers only).	Non-random in-home survey.	To assess whether injury beliefs vary as a function of parent of child gender. Community setting.	Injury Attitudes (30 item questionnaire, in-home survey).	Injury attitudes 2-way ANOVA's	The majority of parents supported the notion that children learn from their injuries. *Toughening*: 22% agreed; and *Learning* – 74% agreed that it was of benefit. These beliefs were more strongly endorsed by fathers than by mothers.	Well-educated sample, less than 25% low income. Study strength: validity measures reported.
Morrongiello & Dayler 1996 Canada	Parental beliefs and attitudes.	Questionnaire admin. to 113 parents.	Survey and focus groups participants recruited from health unit groups.	To assess parental knowledge of injury risks, and beliefs/attitudes towards injury.	Beliefs about safety questionnaire. (author developed) (testing reported, values not given).	Beliefs and attitudes Analysis utilized descriptive statistics.	70% of parents attributed injury experience to child's risky behaviours. Parents were found to hold misconceptions and attitudes that injuries are normative.	Use of multiple methods. Sample was non-random.

Morrongiello & Kiriakou 2004 Canada	Determinants of mothers home safety practices.	Mothers of toddlers ages 19-30 months (n=62). Community setting.	Cross-sectional survey design, randomly selected from database of research participants.	To identify the best predictors of mothers' home safety practices for preventing six type of common injuries (burns, poisoning, drowning, cuts, strangulation/suffocation/choking and falls).	Questionnaires – demographics, and Beliefs About In-Home Injuries questionnaire; structured in-home interview.	Demographics; Self-reported home safety practices for 30 preventive measures, perceptions of different home injuries, perceived vulnerability, severity; prevention effort, preventability & social norms. Hierarchical Regression	Mothers engaged in more practices to prevent burns, drowning and poisonings than for cuts, falls and suffocation. Mothers focused mostly on maternal and child characteristics. Factors motivating mothers to engage in preventive behaviour varied depending on the type of injury. For drownings, poisonings and suffocation, mothers' beliefs about those being more severe injuries were associated with greater precautions reported.	Sample – college educated, all were married and not employed. Less applicability for lower income families. Implication: use of communications tailored to injury type; may need to emphasize potential severity of injury depending on injury type.
Morrongiello et al. 2004a Canada	Toddler home injuries, child and parent factors related to injury occurrence.	N=62 mothers participated with children 2.0 to 2.5 years of age. In-home, community setting.	Longitudinal study over a three month period.	To identify the nature of toddlers' in-home injuries, to assess for sex differences, identify child and parent factors that elevate risk of injury.	Multi-methods of data collection using questionnaires, diaries, telephone and home interviews.	Parent measures included: Parent protectiveness, Beliefs about Supervision & Locus of Control Scale. ANOVA'S	Mothers of boys showed less protectiveness than mothers of girls. Protectiveness was assoc. with few injuries 6 months prior to study. Those reporting they would leave child with no supervision at an earlier age had children with more injuries. Mothers' perceived control over their child's health was assoc. with injuries.	Maternal protectiveness and beliefs about child need for supervision was linked to child injury risk. Low to middle income sample of mothers, 25% of sample earned less than $25,000

Morrongiello et al. 2004b Canada	Types of prevention strategies and their efficacy.	Same as above.	Same as above.	To what extent do parents report using environmental, parent based and child based strategies? What is the effectiveness of these by room of house? Do parents react to prevent recurrence? And how are supervision strategies related to child injury risks?	Same as above.	Mothers reported injury via diary entry forms, type of supervision at time of injury, and preventive actions taken in reaction to child injury. ANOVA's	Parents used three types of strategies and varied these according to room type. Findings suggested that both environmental and parent based strategies are necessary (singularly or together were found to decrease injuries). Child based strategies (teaching) were not found to protect children and at times elevated risks of injury. Mothers did not take action to prevent recurrence of injury.	Taxonomy of supervision developed.
Mull et al. 2001 US	Household context and behaviours for child injury, environmental conditions.	50 mothers born in Mexico, 20 Mexican American and 30 non-Hispanic white mothers of children under 5 years. (n=100).	Qualitative methods using focused ethnographic methods. Purposive sample was identified by door to door canvassing.	To explore the household context of injury among low-income Hispanic children as well as other ethnic minority groups.	Semi-structured questions, observational methods, maternal and child behaviours.	Self-report of previous serious injury (medically attended).	Strong family bonds and cultural traditions such as older sibling supervision found to be related to injury prevention efforts.	Strength: validation of findings with other community members. Limitation: there was little information provided on how data was coded and analyzed.

Mulligan-Smith, Puranik & Coffman 1998 US	Parent safety practices, risk perceptions.	Caretakers of children 0-15 with 51% 0-4 years (N=412), with 81% mothers. Clinic-based.	Clinic survey, non-random sample.	To assess parental safety practices, perceptions of child injury risks and learning needs.	Quantitative survey. Survey development described, no testing reported.	Usual safety practices, perceptions of injury risk, and beliefs re: prevent-ability. No injury measures.	Parent reported behaviours and perceptions of risk. 13 behaviours were reported on. 46% of parents believed most injuries can be prevented, 15% "injuries just happen". Concluded that parents have misperceptions about injuries. Descriptive statistics (percentages) provided.	Poor reporting; results tables difficult to read. Non-random sample used.
Peterson, DiLillo, Lewis & Sher 2002 USA	Mothers' proactive and reactive injury prevention efforts. Toddler injury prevention.	N=170 toddlers ages 18-36 months, non-random community-based sample.	Longitudinal data collection over 6 months; case control methods.	To describe a PEM system (Participant Event Monitoring) as a way to examine injury interventions by mothers.	Parental data recording of interventions and of child injuries; structured interviews every other week for 6 months; 3 instruments used.	Minor injury severity scale, potential injury severity index, interventions used. Descriptive and correlational analysis conducted.	Data collected on 4290 injuries; 94% were minor in nature; 1 out of 3 potentially serious. There was a low, but positive association (unexpected) between proactive interventions and injuries ($r=.17$, $p<0.05$). Reactive intervention used in 6% of situations and 26% of proactive interventions were triggered by near event.	Strengths: reliability measures provided and efforts made to reduce effects assoc.with self report data. Fathers were not included, possibility of social desirability bias.
Pollack-Nelson & Drago 2002 USA	Supervision	Parents of children ages 2-6 years. Percentage of mothers in study not stated. Clinic setting.	Cross-sectional survey design.	To examine supervision practices of parents.	24 item survey administered at a parent resource centre.	Demographics; supervision behaviours; perceptions of injury risk; childproofing behaviours. Injuries not measured.	Supervision in the home related to parental perception of home as low risk environment. Supervision related to age of child, child characteristics, products in use, and number of children. 75% reported direct supervision of 2 year olds vs. 68% of 5-6 year olds.	56% of participants were college grads; no reliability or validity testing reported for survey measures; reliance on parental self-report.

Roberts, Smith & Bryce 1995 UK	Risky environments, risky behaviours, strategies for safekeeping, powerlessness, parental concerns, social strategies.	Residents of Corkerhill, Scotland.	Case-study approach: Qualitative and quantitative measures.	To explore parents' views about accident risks and how they manage everyday risks to children.	Community survey, individual interviews and group interviews.	Survey: self-reported injuries, near misses and local risks. Interview data included antecedents and conseq. of injuries.	Parents were found to know a great deal regarding risks in the local environment. Other safety strategies were used by parents such as informal support & caregiving networks. Barriers identified were such as anxiety, depression and worry.	Little explication of use of theory or specific methods used for analysis.
Russell & Champion 1996 US	Attitudes, beliefs, barriers. (self-efficacy, social influences)	140 low-income mothers with preschool children 1-3 years; conven. sample. in community setting.	Quantitative analysis of survey data.	Relationships between beliefs, social influence, and home injury proofing behaviours.	Structured interviews and home observations Of hazards. Regression analysis used. Instrument development and testing reported.	Perceptions of seriousness & susceptib-ility, benefits, barriers, self-efficacy, social influences. No injury measures.	Mothers with greater perceived self-efficacy were more likely to safe proof their homes.	Injury outcomes not measured and no reporting on non-responders.
Santer & Stocking 1991 US	Current safety practices, living conditions.	N=133 caregivers of children less than 6 years.	Inner – city clinic survey (every 3rd parent).	What are inner-city parents' knowledge and behaviours regarding safety?	Quantitative survey, development not reported on, no reliability/valid. measures. Descriptive statistics provided.	Self-report – last physician visit.	25 potential hazards were assessed. High levels of hazardous practices found: 80% had unlocked storage of hazards and 50% had sub-optimal storage of household products.	Systematic sample, possible bias regarding under-reporting and recall bias.

Schwebel & Brezausek 2004 US	Predictors of unintentional injury risks, parental factors	N= 181 parents (both mothers and fathers) of toddlers ages 6-36 months. Community setting. Secondary data analysis.	Longitud-inal design, phone and in-home interviews.	To examine the role of fathers in children's risk for injury.	Used a subset of the NICHD Study of Early Child Care.	Hierarch-ical regression analysis using 17 predictor variables and 2 dependent variables.	Increased risk for injuries were associated to fathers' perceived gains from employment (contrary to expectations), father involvement with child care only was assoc. with minimal decreases in injury.	Self-report data. Use of existing data source that was originally collected for other purposes. Homogeneous sample – racially and socioeconom-ically. Study relied on maternal recall of injuries only.
Sellstrom & Bremberg 1996 Sweden	Subjective norms, Mothers' injury prevention behaviours.	N=870 mothers of 3, 4 and 9 year olds. Community setting.	Mail-out questionnai re using random selection.	Are subjective norms the most important determinants of mothers' injury prevention behaviours?	Author developed instruments, testing not described. Multiple regression analysis.	Three types of behaviours based on a scenario presented to mother. Social norms.	Perceived norms of father and siblings/friends were found to be the most important factors related to mother's injury prevention behaviours.	Unclear how injury prevention behaviours and were defined and measured. Unclear presentation of findings.
Sellstrom et al., 2000 Sweden	Maternal risk perceptions.	N=870 mothers of 3, 4, 9 year olds.	As above	What are predictors of maternal risk perception?	Unclear as above, how injury behaviours were defined based on responses to the scenario. Multiple regression analysis.	Perceived benefits, barriers, norms, causal attributions , risk perception, self-reported parent behaviour in response to scenario.	Only 14-23% of the variance in mother's risk perception was explained by the model. Causal attribution to child found to be most important predictor of maternal risk perception (i.e. child's perceived lack of skill).	Unclear how variables were measured.

Sparks, Craven & Worth 1994 UK	Social patterning, concepts of 'zones of control,' parental perceptions of risk, SES differences.	Parents of children in two SES areas: recruited via emergency records.	Quant. followed by qualitative approach. Specific qualitative methods not specified.	How do parental perceptions differ between the two SES areas?	In-depth interviews.	Reported accidents in past year, hospital record review, parent reported injuries and near misses.	Perceptions differed considerably between the two areas although both developed rules, routines and practices. There were greater numbers of past hospitalizations due to injury as well as 'near misses' among those from the high accident rate area.	Large age range of the children. Qualitative methods were minimally described.
Thuen 1992 Norway	Parental use of safety measures; health belief model.	N=793 parents of children 6-18 months in four municipalities (68% mothers).	Mail-out questionnaire with a response rate of 85%.	To assess parental safety actions and identify factors associated with reductions in hazards in the home.	Author developed safety device index and safety behaviour index.	Perceived susceptibility, seriousness, barriers and benefits.	The HBM explained only 4% of the variance in the safety. Concluded that the HBM was limited in usefulness in this area. SES was not strongly associated with behavioural measures. Safety device index and safety behaviour index not well correlated.	HBM may provide limited usefulness in explaining parental behaviours. Population based with good response rate.
Ueland & Kraft 1996 Norway	Population-based questionnaire to all mothers in 30 municipalities in Norway (n=1233).	All mothers of 2 year olds in 30 municipalities with a response rate of 70%.	Cross-sectional survey design.	What are the predictors of adoption of safety behaviours by mothers of 2 year-olds? Hypothesis: Adoption of behaviours would be associated with mothers' economic and social resources.	SES, injury history, safety measures (14 items), health beliefs (locus of control, health value).	ANOVA used for analysis.	Adoption of safety measures was found to be associated with economic status. Income was found to be a predictor of use of safety measures. Greater adoption of safety measures was found among higher income, older & married mothers. Neither health control beliefs nor education were identified as important predictors of use of safety measures.	Self-report measures used, potential for socially desirable responses, limited to one geographic region.

Vincenten et al. 2005 The Nether-lands	Parent attitudes, parent safety behaviours.	Parents of children 0-4 years living in 14 EU member states.	Quant. survey of 2088 parents using omnibus surveys.	What are parents' perceptions, attitudes and behaviours towards child safety?	9 survey questions were asked of parents using face to face or telephone interviews. Data collection method varied by country.	Descriptive statistics (percents) were reported.	Primary concern of parents was risk of child being hit by a car. The most frequently mentioned safety action was keeping medicines out of reach. 46% of parents mentioned that child protection is difficult because it is not possible to watch children all the time (followed by a lack of awareness about injury). 77% agreed that child injuries are avoidable (10% disagreed). Young, low income parents were more likely than higher income parents to agree that injuries are avoidable.	Lower income parents were more likely to say they supervise while higher income mentioned purchase of safety products. Difficulties mentioned by lower income parents were child related. Descriptive statistics only; mostly a population based sample.
Wortel & de Geus 1993 The Nether-lands	Serious injury, consistency of behaviours, levels of safe behaviour (safe, moderately safe and unsafe), supervision.	N=1129 mothers of preschool children. Community -based setting.	Random stratified mail out survey, collected in-person.		Instrument not well-described, reliability & validity not reported. Analysis: descriptive stats (frequencies, percentages and chi squares).	Injury outcomes not measured, but do define 'serious injury'.	No relationships found between safety measures and educational level. Use of safety measures not consistent across types of injury. Authors suggested that injury issues should be advocated for separately.	Measures not well described. How observations were made is unclear.

Appendix 6
Study Eligibility Form

Mother's Efforts to Safeguard Children in the Home Environment
Eligibility Screening Form

Date: _____

Name: _____

Intro: Hello, my name is Lise Olsen and I am a UBC student calling from the B.C. Injury Research and Prevention Unit.
Thank you very much for your interest in being part of this study. Do you mind telling me where it was that you heard or read about the study?

_____

Study overview
In this study which is being conducted as part of a PhD project, we are interested in finding out more about the kinds of things that mothers do on a daily basis to keep their kids safe and the kinds of challenges they face. The study would involve visits to your home on two different occasions. The first visit would be an interview and the second would be a home visit where I observe the daily routine in the household. As a reminder, you would be reimbursed $50 for your time as a participant in this study. Do you have any questions about the study? Do you think you would be interested in being a part of the study?

□ Yes
□ No

If yes, thank you for your interest. Before I can sign you up as a participant, there are a few questions that I need to ask to see if you fit criteria that we have for this study.

1. Are you 18 years of age or older?

□ Yes
□ No

2. Are you the main caregiver of one or more children between 1 and 4 years of age?

□Yes
□ No (If no, stop here and explain that they are not eligible).

3. How many children do you have and what are their ages?

Child 1 Boy Girl Age _____
Child 2 Boy Girl Age _____
Child 3 Boy Girl Age _____
Child 4 Boy Girl Age _____

4. In total, how many people live/stay in your household? _____

5. What kind of area do you live in?

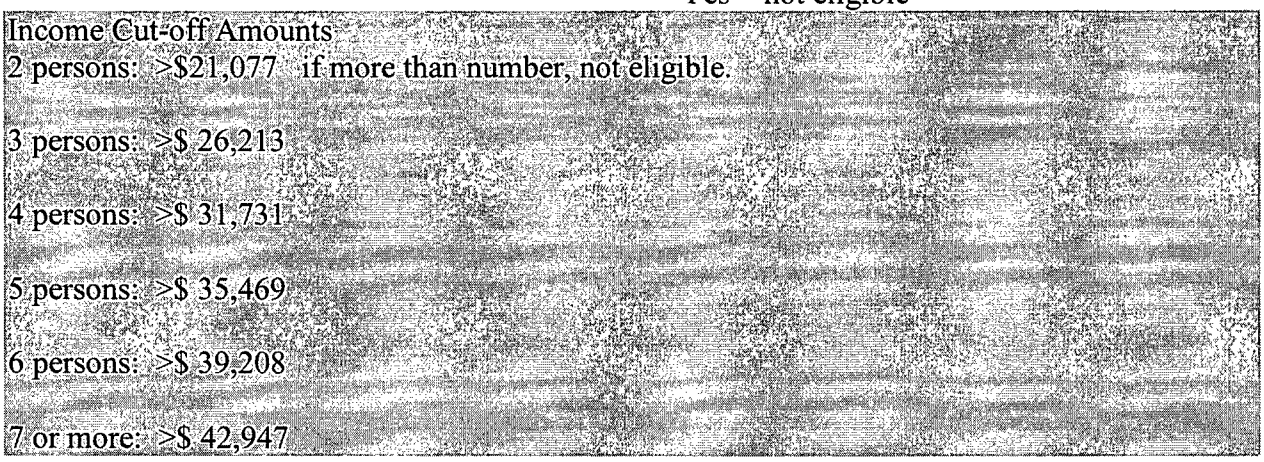
- o town of XXXX
- o a suburban area
- o a rural area - if yes, do you live on a farm?

(If they do live on a farm, stop here and explain that they are not eligible)

The focus of this child safety study is on mothers with limited incomes and I need to ask one question about your financial situation.

6. Can you tell me if your family income is more than $ _____

No = eligible
Yes = not eligible



IF NOT ELIGIBLE:
I'm sorry, but for this study we are looking mainly at families who are living at a certain income level, and so you don't fit the criteria for the study. However, I would like to thank you very much for your interest in being a participant.

IF ELIGIBLE:
I would like to give you a little bit more information about the study at this time. The purpose of the study is to build greater understanding about the kinds of everyday safety behaviours that mothers use to safeguard young children between the ages of one and five years in the home environment, and particularly in homes with less financial resources. We would like to learn more about the opinions that mothers hold about child safety issues and about the types of factors that support or hinder their efforts to safeguard children in the home.

In this study, you will be asked to participate in two sessions. The first will be a tape-recorded interview lasting approximately 60 minutes. In addition, there will be second home visit consisting of a 2-3 hour home observation session conducted by the researcher.
You will be provided with the honorarium of $50.00 at the time of the first home visit and the results of a home safety checklist following the second visit.

Do you have any questions at this time about participating?

Are you still interested in being a participant?

- □ Yes
- □ No (If no, thank you anyways for your interest).

If yes, schedule first home visit time:

Schedule interview time: Date: _____
Time: _____

(Will call the evening before to confirm. Date: _____)

(Or – call back later to schedule: _____)

Confirm:
Name : _____
Address: _____
Phone: _____

Appendix 7
Consent Forms

[*Date*]

Initial Letter of Contact

An invitation for you to participate.....

Dear [*insert name*]:

Thank you very much for your recent participation in the "XXXX Program" study conducted by the B.C. Injury Research and Prevention Unit and the XXXX Health Unit. Your participation in this study has been greatly appreciated and serves as an important opportunity to help create safer environments for young children.

You had indicated that you would be willing to be contacted about future child safety research studies. Therefore, we would like to take this opportunity to invite you to participate in a study for a PhD thesis that is about to commence.

The purpose of the study is to build greater understanding about the kinds of everyday safety behaviours that mothers use to safeguard young children between the ages of one and four years in the home environment, and particularly in homes with limited financial resources. We would like to learn more about the opinions that mothers hold about child safety issues and about the types of factors that support or hinder their efforts to safeguard children in the home.

In this study, you will be asked to participate in a tape-recorded interview and to fill out a home safety questionnaire. This session will take approximately 90 minutes. In addition, there will be a 2-3 hour home observation session conducted by the researcher. Additional details about the study are provided in the consent forms included with this letter.

In 1-2 weeks time, Lise Olsen, the PhD student conducting the study will contact you by telephone to ask whether you are interested in being a part of this study. An honorarium of $50.00 will be paid to study participants.

Thank you again for your support and participation.

Sincerely,

Parminder Raina, PhD
Principal Investigator
Director, B.C. Injury Research and Prevention Unit.

Page 1 of 1.
Version July 22, 2003.

Informed Consent Form

Project Title: Understanding Mothers' Efforts to Safeguard Children in the Home Environment: A Pilot Study.

PhD Student Investigator:
Lise Olsen, PhD student, UBC Individual Interdisciplinary Studies Graduate Program.

PhD Faculty Co-Supervisors:
Dr. Joan Bottorff, Professor, University of British Columbia, School of Nursing.
Dr. Parminder Raina, Adjunct Professor, University of British Columbia, Department of Health Care and Epidemiology & Director, B.C. Injury Research and Prevention Unit.

Purpose: The purpose of this study is to increase understanding about the kinds of everyday safety behaviours that mothers use to safeguard young children between the ages of one and four years in the home environment, and in particular those mothers with limited financial resources. We also want to better understand mothers' beliefs, ideas and values about safety risks to children and the kinds of factors that may help or hinder safety efforts. The information collected in this study will be used for a PhD thesis.

Study procedures: As a study participant, we are asking for you to take part in two sessions in your home. The first session will last approximately 60 minutes. In this session, you will be asked to take part in an audiotaped interview about your opinions on child home safety issues. The second session will be a 2-3 hour observation visit in your home. During this session, the researcher will be making observations related to child safety as you go about your daily routine with your child or children. At the end of the second session, the researcher will share with you the results of a home safety checklist that she has completed during the visit. Both visits will be scheduled at times that are convenient for you.

Risks and Benefits: There are no known risks involved in participating in this study. The information you provide will be helpful for learning more about how mothers' actions to keep children safe in the home environment can be supported.

Remuneration: An honorarium of $50.00 will be provided to you at the first session to acknowledge the time you spend as a participant in this study.

Confidentiality: The identities of subjects participating in the study will be kept strictly confidential. All research documents will be identified only by a code number and will be kept in a locked filing cabinet at the B.C. Injury Research and Prevention Unit office. Computer records will be protected by passwords only accessible by the researchers. Audiotapes will be kept in a locked cabinet and subjects will not be identified by name in any reports of the completed study. The data obtained may be used again in future studies of mothers' opinions and efforts regarding child safety in the home.

If information arises during the course of the interviewer that causes the researcher to suspect that a child may be being abused, neglected or in need of protection, the researcher must report that to the Ministry of Children and Family Development.

Contact for information about the study: If you have any questions or desire further information with respect to this study, you may contact Lise Olsen, PhD student Investigator at 604-XXX-XXXX extension XXXX or her Faculty Supervisors (Dr. Joan Bottorff at 604-XXX-XXXX or Dr. Parminder Raina at 604-XXX-XXXX).

Contact for concerns about the rights of research subjects: If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-XXX-XXXX.

Consent: Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without any consequences.

Your signature below indicates that you have received a copy of this consent form for your own records. Your signature indicates that you consent to participate in this study.

Subject Signature:_____ **Date:** _____

Printed Name of Subject: _____

Witness: _____ **Date:** _____

Agency Approval Form

Research Project: Understanding Mothers' Efforts to Safeguard Children in the Home Environment.

The University of British Columbia and the B.C. Injury Research and Prevention Unit are conducting a study on how mothers safeguard young children in the home environment.

The purpose of this study is to build greater understanding about the kinds of everyday safety behaviours that mothers use to safeguard young children between the ages of one and four years in the home environment. We would like to learn more about the opinions that mothers hold about child safety issues and about the types of factors that support or hinder their efforts to safeguard children in the home. The information collected in this study will be used for a PhD thesis by Lise Olsen, PhD Candidate who is enrolled in the UBC Individual Interdisciplinary Graduate Studies Program. For additional information regarding the study, please contact Ms. Olsen at 604-XXX-XXXX.

Agency Approval:

I hereby give consent for promotional materials including posters and pamphlets advertising this study to be displayed in public areas.

Date: _____

Name: _____

Signature: _____

Agency: _____

The University of British Columbia
Office of Research Services and Administration
Behavioural Research Ethics Board

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	NUMBER
Bottorff, J.L.	Nursing	B03-0395

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT

UBC Campus ,

CO-INVESTIGATORS:

Frankish, James, Health Care/Epidemiology; Olsen, Lise, Health Care/Epidemiology; Raina, Parminder, Health Care/Epidemiology

SPONSORING AGENCIES

Canadian Institutes of Health Research

TITLE:

Understanding Mothers' Efforts to Safeguard Children in the Home Environment

APPROVAL RENEWED DATE	TERM (YEARS)	
AUG 17 2005	1	

CERTIFICATION:

The protocol describing the above-named project has been reviewed by the Committee and the experimental procedures were found to be acceptable on ethical grounds for research involving human subjects.

Approval of the Behavioural Research Ethics Board by one of the following:
Dr. James Frankish, Chair,
Dr. Cay Holbrook, Associate Chair,
Dr. Susan Rowley, Associate Chair

This Certificate of Approval is valid for the above term provided there is no change in the experimental procedures

The University of British Columbia
Office of Research Services and Administration
Behavioural Research Ethics Board

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	NUMBER
Bottorff, J.L.	Nursing	**B03-0395**

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT

UBC Campus ,

CO-INVESTIGATORS:

Frankish, James, Health Care/Epidemiology; Olsen, Lise, Health Care/Epidemiology; Raina, Parminder, Health Care/Epidemiology

SPONSORING AGENCIES

Canadian Institutes of Health Research

TITLE

Understanding Mothers' Efforts to Safeguard Children in the Home Environment

APPROVAL RENEWED DATE	TERM (YEARS)	
AUG 21 2006	1	

CERTIFICATION:

The request for continuing review of the above-named project has been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.

Approved on behalf of the Behavioural Research Ethics Board
by one of the following:
Dr. Peter Suedfeld, Chair,
Dr. Jim Rupert, Associate Chair
Dr. Arminee Kazanjian, Associate Chair

This Certificate of Approval is valid for the above term provided there is no change in the experimental procedures

Appendix 8
Demographic Form

Understanding Mothers' Efforts to Safeguard Children in the Home Environment: A Pilot Study.
Demographic Questions

1. How old did you turn on your last birthday? _____

2. How many children do you have? _____

3. What are your children's ages and gender?

Child	Age	Gender
Child 1		
Child 2		
Child 3		
Child 4		

4. Are you:
□ Now married and living with spouse
□ Common law relationship/live in partner
□ Separated
□ Divorced
□ Widowed
□ Never Married

5. Do you currently rent or own your home?
□ Rent
□ Own

6. What is your highest level of education?
□ No schooling
□ Elementary incomplete
□ Elementary complete
□ Junior High incomplete
□ Junior High complete
□ High School incomplete
□ High School complete
□ Non-university incomplete
□ Non-university complete
□ University incomplete
□ University diploma/certificate
□ University bachelor's degree
□ University professional degree (law or medicine)
□ University master's degree
□ University doctorate
□ Other _____

7. Which of the following best describes your main activity during the last 12 months? Were you....

- □ Working at a job or business?
- □ Looking for work?
- □ A student?
- □ Retired?
- □ Keeping house?
- □ Other _____

8. In total, how many people live/stay in your household? _____

9. Most people in Canada describe themselves as Canadian first but also identify themselves based on their background or the nationality of their ancestors. What would you say is your main ethnic background? (Tick all that apply).

- □ Aboriginal/First Nations
- □ African
- □ Australian
- □ British
- □ Canadian
- □ Caribbean
- □ Chinese
- □ European
- □ Fijian
- □ French
- □ Hindi
- □ Hispanic
- □ Japanese
- □ Korean
- □ Middle Eastern
- □ Punjabi
- □ Russian
- □ Scottish
- □ Sri Lankan
- □ Taiwanese
- □ Filipino
- □ Welsh
- □ Other: Please specify: _____

10. What is your best estimate of the total income of all household members from all sources in 2003 before taxes and deductions. Was the total household income....

- □ Less than $ 10,000
- □ between $10,000 and $ 20,000
- □ between $ 20,000 and $ 30,000
- □ between $ 30,000 and $ 40,000
- □ over $ 40,000

11. Has your child had any unintentional injuries that have been treated at a doctor's office or hospital?

□ Yes □ No

If yes, how many injuries ? _____

How old was your child at the time? _____

Please describe the type of injury and how it happened?

_____

_____

_____

Thank you for completing this form.

Appendix 9
Interview Questions December 2004

1. Can you tell me about a typical day and some of things you do to keep your child safe at home?
   - What is it like for you to keep up these things on a daily basis?
   - Can you give me some examples of some of these things?

2. What are some of the main things that you worry about in terms of your child (or children) staying safe and not being injured in and around your home?

   - What sorts of safety risks are you most concerned about for your children at this stage? (What would you say are your **top concerns**?)
   - Has this changed over time?
   - Does your partner share similar concerns as you?
   - Would you say that your partner sees child safety issues the same way you do? Are there similarities or differences in the things you do to keep your child safe? If and when there are differences, what happens? When do the differences become an issue?

3. When you think about the different ways that you safeguard your child, would you say that you rely more on direct supervision or more on changing the environment so your child is less likely to come in contact with hazards? Which do you think is more important?

   - A number of the mothers in this study have talked about feeling some conflict between wanting to let their child explore but at the same time not wanting their child to get hurt? Is this an issue that you sometimes struggle with? How do you manage this conflict?
   - Some of the mothers in this study have told me that they sometimes find it difficult because they feel like they have to be on guard all of the time, watching their child? Is this an issue for you?

4. Can you tell me about some features of the indoors of your home that might make it harder to keep your child safe in the home?
   - Are there any features of your home that you find helpful in your efforts to keep your child safe?
   - What about the outdoor area of your home? Are there features that you find make it harder? Or that make it easier to keep your child safe?
   - If there are repairs to the home that you feel are needed, who makes these repairs?
     - How hard is it to have repairs done?
     - What sorts of things would help you with making needed repairs?

5. Can you tell me anything about different ways that the people around you do or say things that help you keep your child safe?

- Are there any things that other people do or say that make it more difficult?

6. Can you tell me about some of the things that you like or dislike about the area in which you live in terms of child safety?

- Are there things in the neighbourhood that make it easier or harder to keep your child safe?

- What about things related to the larger community (say, in XXXX in general) that makes it easier? Or that make it harder to keep your child safe?

7. Do you have any health issues that make it challenging for you to keep your child safe in and around the home? Do you or your partner smoke?

8. Can you tell me whether you have any set safety rules for your kids? Who, would you say, typically enforces those rules?

9. What happens when other people are in charge of caring for your child in your home (baby sitters, family members, etc)? What concerns, if any, have you had about your child's safety when others are caring for him or her?

10. Can you tell me about a time when your child was injured unexpectedly? Can you tell me about what that experience was like for you? What happened after that experience?

11. Can you tell me about whether you use any kinds of information to learn about safety issues and young children?

12. Can you tell me about any community resources you have used related to child safety?

Some of the next questions are about issues related to living on a lower income:

13. There are lots of really good mothers. And we know that the amount of income that mothers have varies. How do you think that the amount of money that mothers have access to influences the ways they safeguard their children?

14. Do you think that there is a stigma (or stereotype) that is related to being a mother and living on a low-income?

- (If not already included: ask – you have told me about your general financial situation, do you mind telling me a bit about the sources of income that you rely on?)

15. (If on social assistance) Some of the mothers in this study have told me about feeling that there is some judgment that goes along with being on social assistance – do you feel that there is sometimes people make these kinds of judgments about mothers on social assistance (or on low-incomes)?

- Mothers have also told me about their fears about being reported to the child welfare department. Do you think a lot of mothers are fearful that someone might report them?

- In some instances, other mothers have described situations where sometimes people will even report other mothers just to be mean, or to or because they hold a grudge against someone. Would you say this is a common thing that goes on?

16. How do you think that feelings of being judged and fears of potentially being reported might be connected to how mothers safeguard their children?

- Do you think it affect the things they let their child do?
- Do you think it might affect the kinds of things they worry about?
- What kinds of effects this has on the moms, on the kids?

17. Are there any things that you wish you could change which would make it easier for you to keep your child safe?

- How confident do you feel about the possibility of these changes taking place?
- A number of women in this study have mentioned that at times they feel like they hold sole responsibility for ensuring that their children stay safe. Do you feel this way? Or do you feel that you have some supports for your efforts?

18. Some of the mothers in this study so far have also mentioned that they consider themselves to be "overprotective." What do you think being "overprotective" means?

Appendix 10
Recruitment Poster

How do moms keep young children from getting injured in the home?

We would like to hear from mothers who are living in the xxxxx area with one or more children between 1-4 years.

Participants in the study receive $50.00 and a home safety check.

To find out if you are eligible for this study and for more information, please contact Lise at (xxx)xxx-xxxx or at xxxxx@xxxxx

The University of British Columbia and the B.C. Injury Research and Prevention Unit are conducting a study on how mothers safeguard young children in the home environment.

B.C. *Injury* Research
AND PREVENTION UNIT

Child Safety Study (xxxxx@xxxxx) (xxx)-xxx-xxxx

Child Safety Study (xxxxx@xxxxx) (xxx)-xxx-xxxx
Child Safety Study (xxxxx@xxxxx) (xxx)-xxx-xxxx
Child Safety Study (xxxxx@xxxxx) (xxx)-xxx-xxxx
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