

**UNINTENTIONAL CHILDHOOD INJURIES IN THE HOME: THE
PERCEPTIONS OF FIRST TIME MOTHERS ON THE RISK FACTORS IN
DELFT, CAPE TOWN**

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KEYWORDS

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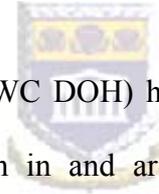


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ABSTRACT

Injuries continue to be a significant health problem in children. Injuries put more children in hospital than any other single cause (Van As, 2003). Injuries to children are due to falls, burns, poisoning, crushing, suffocation, traffic incidents and other causes both intentional and unintentional. Preschool children most commonly experience injuries in the home where they spend most of their time (Reading *et al*, 1999).



The Western Cape Department of Health (WC DOH) has decided to focus on the prevention of unintentional injuries to preschool children in and around the home. It is necessary to first determine the risk factors to these injuries before embarking on safety promotion and injury prevention programmes. To date there are no South African studies on the perceptions of risk factors for unintentional childhood injuries of first time mothers. Delft was chosen because it is a low-income area (which is recognised as being a risk factor to unintentional childhood injuries) and it is one of the pilot sites for the injury prevention programme of the WC DOH.

An exploratory qualitative study was conducted at the Delft Community Health Centre (CHC) using focus group discussions. Four focus group discussions were conducted, consisting of mothers with only one child (who was of preschool age). Their perceptions of the risks factors to injury, their experiences of injuries to children generally and their perceptions of the causes of these injuries were explored. Their injury prevention measures were also ascertained. By exploring these

perceptions, appropriate injury prevention and safety promotion programmes could be designed that would be specific to the local context in order for them to be effective. Data was analysed using thematic content analysis and the findings will be submitted to the WC DOH and the Health Promotion Officer at Delft CHC.

This study found that the respondents perceived risk factors to unintentional childhood injuries to be socio-economic conditions as well as alcohol abuse, issues of supervision and neglect, maternal support and knowledge and child characteristics and development. The respondents also discussed the measures they perceived which kept children safe.

It is clear that a multi-faceted integrated approach to injury prevention is needed for the complex problem of unintentional childhood injuries in Delft. What needs to be explored with the mother in order to plan tailored interventions are the risks factors that she is concerned about, what the barriers are to preventing these risks factors and what support can be offered to her. It must be remembered that knowledge does not always determine one's behaviour. Intervention programmes should therefore include active as well as passive measures.

November 2004

DECLARATION

I declare that *Unintentional Childhood Injuries in the Home: The Perceptions of First Time Mothers on the Risk Factors in Delft, Cape Town* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Suraya Mohamed

November 2004

Signed:.....



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1. INTRODUCTION

Injuries continue to be a significant public health problem, ranking among the leading causes of death and burden of disease in the world. It occurs in all regions and all countries, affecting people in all age and income groups (World Health Organisation, 2000). The magnitude of the problem however varies considerably by age, sex, region and income group (World Health Organisation, 2000).

The burden of childhood injuries is huge. For each injury death there are many more injury survivors, who require hospitalisation, treatment in trauma units or treatment outside the hospital (Cywes, 1990; World Health Organisation, 2000). Burns injuries were the most common types of fatal injuries in South Africa during 2001 for children under 5 years (Medical Research Council, 2001), but injuries due to falls were consistently the most common non-fatal injuries (CAPFSA, 2004). It is therefore important to measure fatal as well as non-fatal injuries, to have a more accurate understanding and description of the overall burden of injury (Powell & Tanz, 2002). A study undertaken in the United States found that for every childhood injury death, approximately 1000 injured children received emergency department treatment (Ballesteros, *et al*, 2003). Injuries put more children in hospital than any other single cause (Van As, 2003).

Annually, approximately 8000 children are treated at the Red Cross Children's Hospital's Trauma Unit in Cape Town due to falls, burns, poisoning, crushing, suffocation, traffic incidents and other causes, both intentional and unintentional (WC DOH, 2003). According to a Sunday Times newspaper article, 743 children were treated at Red Cross Children's Hospital's trauma unit for the month of September, 2004 alone (Davids & Fredericks, 2004). The Red Cross Hospital's statistics are limited to children seen at that hospital only. The children presenting with injuries at other health facilities are not included in these statistics. Injuries that are not seen at Red Cross, most

likely seek medical advice at clinics, day hospitals, general practitioners or they might be treated at home. Only the most severe or urgent cases are treated at Red Cross Hospital. These statistics therefore are not a true reflection of the magnitude of the childhood injury problem. A 13-country survey conducted by a child-safe advocacy group - Safe Kids in 2002, found that South Africa fared the worst in terms of deaths due to unintentional injuries (SAFE KIDS, 2002). The survey also reported that child injury deaths cost South Africa 5% of the country's Gross Domestic Product. This figure only represents the deaths due to injury. The cost could be much higher when the family and community costs of caring for these children are taken into consideration (SAFE KIDS, 2002).

In the case of preschool children, unintentional injuries most likely occur in the home, as this is where they spend most of their time (Reading *et al*, 1999). There are many emotional and social consequences of injury for the children and their caregivers such as financial costs including fire, ambulance and health sector services and also loss of earnings of parents or caregivers (Roberts *et al*, 1995). Cywes (1990) observes that trauma is still regarded as 'the neglected disease of modern society' because it is seen as being inevitable. There is often a notion among caregivers, victims and medical personnel that unintentional injuries cannot be prevented. According to the Oxford Concise Dictionary, the word "accident" is defined as "An event that is without apparent cause, or is unexpected; occurrence of things by chance". Unintentional injuries are preventable and avoidable and are not due to chance. "Unintentional injury" is therefore the preferred term used in the literature (Davis & Pless, 2001).

In early 2003, the Health Promotion Programme of the WC DOH was given the responsibility of developing a provincial programme for the prevention of injuries to children. Delft, which is a low-income area, is one of their pilot sites. It is essential to first determine the risk factors associated with injury before attempting to design any injury prevention programmes. According to Michalsen (2003: 201), risk means "an individual's perception of the likelihood and seriousness of an

undesirable event." The same author also claims that perception appears to be influenced by personal traits and socio-cultural parameters. Roberts (1996) claims that more effort should be made to identify parent's perceptions of risk because people who live in a particular environment are better placed to be aware of and responsive to the risks in their own environments than health and social welfare personnel. There have been no studies documented in South Africa looking at the perceptions of the risk factors associated with household unintentional childhood injuries of first time mothers. The present study therefore attempted to explore the perceptions of risk factors of first time mothers in Delft. When referring to risk factors, the researcher refers to the underlying causes of unintentional childhood injuries.

The study design was a qualitative one using focus group discussions as a means of data collection. Most studies undertaken on childhood injuries are quantitative but this type of design can omit important information that relates to the occurrence and context of the injury. A qualitative study will provide an in-depth understanding of all the factors (especially contextual factors) relating to the injury. Roberts *et al* (1995) and Bartlett (2002) emphasise that those who want to prevent unintentional injuries especially at primary health care level, need to devise ways of collecting data at local community level, which is what the current study attempted.

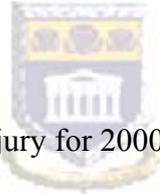
The next section provides a review of the literature on unintentional childhood injuries. The literature review is followed by a section on methodology that discusses the study design and the limitations of the study, which is then followed by a description of the findings of the study. The penultimate section analyses and discusses the focus group discussions. The final section draws conclusions and makes some recommendations based on the findings.

2. LITERATURE REVIEW

This section provides a review of the literature regarding the extent and the causes of unintentional childhood injuries globally and in South Africa. Literature on the various risk factors related to unintentional childhood injuries is also reviewed as well as people's perceptions of these risk factors. The section concludes with literature on injury prevention strategies.

According to the World Health Organisation (2000), injuries represent a substantial public health burden in all societies. Injury can be classified into two groups i.e. intentional and unintentional. Roberts *et al* (1995) observe that intentional childhood injuries (child abuse, child murders and firearm injuries and deaths) have a higher profile in the media than unintentional injuries.

2.1. Global context



The World Health Organisation's report on injury for 2000, found that globally, the leading causes of death from unintentional injuries for children under 14 years were traffic injuries, drownings, fires and poisons (World Health Organisation, 2000). This report also found that although falls are not among the leading causes of death in the world, they are a leading cause of injury burden for children. A study conducted on childhood injuries in Hong Kong by Chan *et al* (2000) found that falls appear to be the main cause of childhood injury to children aged 0-15 years attending the accident and emergency department. The authors compared their hospital-based findings to other similar international studies in USA, Nigeria, Canada and Greece. Nigeria was the only country that did not have falls as its leading cause of injury, but rather traffic-related injuries after the category on other external causes. As these are hospital-based studies, the data by Chan *et al* (2000) should be viewed with caution because injuries that are not seen at the hospitals are not recorded and this might not give an accurate reflection of the extent of the overall injury problem.

Although there is substantive literature on injury from developed countries such as Sweden, UK and USA, the impact of injury in developing countries is not adequately documented. Amongst those studies that have been undertaken in developing countries, Kobusingye *et al* (2002) found in a study conducted in Uganda, that falls were the most common cause of injury followed by traffic injuries, burns and cuts/stabs for children under 10 years old. In a similar study in Ghana on children, Abantanga & Mock (1998) reported that traffic-related injuries were the most common followed by falls then burns.

2.2. South African context

South Africa has particularly high injury rates. In South Africa, approximately 70 000 people of all ages are killed annually and a further 3, 5 million seek health care due to trauma (Peden & Butchart, 1999). The 3rd annual report of the National Injury Mortality Surveillance System (2001) found that burns, drowning, poison ingestion, blunt trauma, falls and strangulation are amongst the ten leading external causes of non-natural deaths for the 1 to 4 year age group, with burns being the most common (Medical Research Council, 2001). According to the Child Accident Prevention Foundation of South Africa (CAPFSA), falls were the leading cause of injury in children under 14 years from 1997 to 2000, followed by traffic-related injuries and burns (CAPFSA, 2004).

The need for improved surveillance was recognised at the Provincial workshop on unintentional childhood injuries (WC DOH, 2003). With an improved surveillance system, the magnitude of the problem could be assessed, high-risk groups and risk factors could be identified and appropriate action could then be undertaken. There is currently no formal morbidity data in the Western Cape on childhood injuries except for those reported at Red Cross Children's Hospital. Data should also be collected from other facilities to give a true reflection of the extent of the problem.

2.3. Risk factors

The current literature on unintentional childhood injuries implicates a variety of risk factors. Evans & Kohli (1997) state that it is recognised that a complex range of factors such as the physical and psychosocial environment and the injury-inducing agent contribute to the occurrence of an injury just as much as the behaviour of the persons involved. The factors associated with injury are an intricate relationship between the child, the agent of injury and the environment (Kibel *et al*, 1990). In exploring the interrelationship and relative importance of potential risk factors, Ramsey *et al* (2003) found that potential risk factors could be stress in mothers, increased number of children in the family and low education of mothers.

Globally, studies have revealed that childhood injuries are more common in low-income societies. Laflamme (2001) and Petridou & Tursz (2001) claim that by identifying the environmental characteristics of social deprivation, it could assist with the recognition of the way in which social factors affect injury risk. Durkin *et al* (1994) examined a range of socio-economic factors such as poverty, single parent status, low education levels, overcrowding and employment and found that low income was the strongest predictor for all types of injuries. Despite recent advances, Petridou & Tursz (2001) and Bennett Murphy (2001) claim that for many types of injuries such as burns, social differences have not decreased, not even in developed countries where the injury mortality rates are dropping.

Risk of unintentional injuries might be higher among children of adolescent mothers as is suggested by Bennett Murphy (2001), McClure-Martinez & Cohn (1996) and Reading *et al* (1999). In the Czech Republic, Bobak *et al* (2000) examined maternal socio-economic characteristics and infant mortality from injuries and found that maternal age and education were, among others, factors that influenced injury deaths. Gulotta & Finney (2000) reviewed studies of risk factors associated with

unintentional childhood injuries and highlighted adolescent mothers and their children as a high-risk group. They reviewed several studies that revealed that the children of young mothers were at greater risk of injury due to their lack of experience about childhood development, and inappropriate parenting skills. However, evidence from a study conducted by Lopez Turley (2003) suggests that maternal age is not a predictor of children's outcome but rather the disadvantaged family background of the mother. She cites Luker (1996) who showed that young mothers were more likely to come from poor homes and had lower aspirations.

The children of single mothers also appear to be at higher risk for injury. According to Roberts & Pless (1995), children of lone mothers in Britain have injury rates that are twice as high as those of children living with 2 parents. They examined the link between lone parenthood and child injury and found that poverty, poor housing and social isolation were qualifying factors for lone mothers in Britain and that these factors, which are linked, are strongly related to child injury risk. Ringback Weitoft *et al* (2003) also demonstrated these observations, when they conducted a population-based study in Sweden and concluded that children of single mothers had increased risks of mortality, severe morbidity and injury.

Inadequate or lack of supervision is another risk factor to childhood injuries. As Peterson *et al* (1993: 934) state, "...parental negligence in the form of failure to provide acceptable supervision and care is responsible for a sizeable proportion of children's injuries." They stress that parental supervision is an important determinant of child safety. They also agreed that preschool children needed constant supervision in most environments, including in the home (Peterson *et al*, 1993).

Saluga, Brenner *et al* (2004) cites Iltus (1994) when they confirm that there are three types of supervision: direct supervision, delegated supervision and auditory supervision. Direct supervision implies visual supervision observed by the parent, delegated supervision is when the parent depends

on somebody else to supervise the child visually and auditory supervision is when the parent monitors the sounds from the room that the child is in without being in the same room.

In the World Health Report of 2002, it was stated that perceptions of risk are influenced by people's knowledge of risk factors in combination with the context as embedded within the different economic, social and cultural environments. It was also reported that the perceptions of people were based on different types of information such as from the media, family, peers, their culture and other members of the community (World Health Organisation, 2002). It is through this knowledge that individuals understand and perceive the world. Butchart *et al* (2000) claim that citizen perceptions of injury causes and solutions are important determinants of their responses to injury prevention as they demonstrated after exploring the people's perceptions in a qualitative study in a Johannesburg township. The authors made constructive recommendations about injury prevention after exploring the people's perceptions in that particular study.



Child development has also been recognized as a major risk factor to childhood injuries. Wilson, Baker *et al* (1991) lists the different stages from infancy to pre-schoolers and the associated actions that could lead to injury such as babies reaching for anything (a hot cup of tea which could result in scalding) or the pre-schooler who imitates adults (e.g. playing with matches).

2.4. Injury prevention

Because children lack judgment and experience, they cannot be expected to avoid injury on their own. It is therefore the responsibility of the adults caring for the children, to keep them safe. Safety information alone does not give the caregiver the competency to implement safety practices (Limbo, 2003). Research has shown that multifaceted, multidisciplinary models of childhood injury prevention methods are needed to be effective because of the many different types of injuries and

the risk factors associated with them (Gulotta & Finney, 2000). It was also found that structural as well as environmental interventions were useful in many instances but, suggestions that behavioural strategies be incorporated in conjunction with these interventions were also made (Gulotta & Finney, 2000).

Home visitation has been proven to be effective for injury prevention because it employs a multifaceted approach. Mothers who received home visitation were found to have improved child-care techniques, addressing safety in the home environment and increased their knowledge on child development all of which improves child safety (Hammond-Ratzlaff & Fulton, 2001; Culp *et al*, 1998).

3. AIM

To explore the perceptions of first time mothers of the reasons for unintentional childhood injury occurrences in the home in Delft.



4. OBJECTIVES

- 1) To ascertain the mothers' awareness of the types of childhood injuries that could occur in the home.
- 2) To describe the mothers' opinions on how they think these injuries occur.
- 3) To explore the mothers' perceptions of the risk factors associated with these occurrences.
- 4) To ascertain the mothers' choices on injury prevention strategies.
- 5) To make recommendations based on the findings.
- 6) To disseminate the information to the Health Promotion Programme of WC DOH.

5. METHODS

5.1. Study design

Qualitative research methods are increasingly being used for social research. It was found in the 2002 World Health Report that by the early 1990s, quantitative approaches to risk assessment and management were not always reaping the expected results because different groups had different perceptions of risk according to their social, cultural and economic context (World Health Organisation, 2002). Sparks *et al* (1994) stressed the importance of qualitative methods in understanding the social and material environment in which people live and which affects their well-being. They maintain that the use of this method will draw out people's perceptions of the processes, perspectives and strategies involved in everyday health-related behaviours including keeping children safe. Qualitative research helps us to understand social phenomena in natural surroundings and emphasises the meanings of experiences and views of the respondents (Pope & Mays, 1995).



People are valuable sources of information and are able to verbalise their feelings and perceptions especially when they feel strongly about an issue or if they are directly affected (Vaughn *et al*, 1996). This method also allowed for the examination of the context in which the injuries occurred such as the environment and what led up to the event. Public health strategies must consider the realities of life and its ambiguities in order to be effective (Gifford, 1996). The researcher therefore chose to undertake an exploratory qualitative study to allow for the examination of the context in which the injuries could occur such as the environment and the events leading up to the injury occurrence.

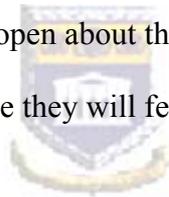
5.2. Study population and sample

The study population was mothers attending the Delft CHC. In qualitative research, sampling strategies are designed to produce information -rich cases that will yield in-depth understandings about particular processes or context (Gifford, 1996). Purposive sampling was used to select the respondents of the focus groups. Mothers with only one child were selected from mothers attending the baby or paediatric clinic at the CHC because the perceptions of mothers with more than one child might be influenced by their experience and other factors such as the presence of other siblings. Nathans, Neff *et al* (2000) found that the risk of injury increased with the number of older siblings, most likely due to inadequate supervision. It is also maintained that older siblings could have persuasive powers over their younger siblings' risk taking behaviours (Morrongiello & Bradley, 1997). As the focus of the present study was on unintentional childhood injuries in the home only, another criteria was that only mothers with preschool - aged children were selected because these children spend more time at home than older children who would be exposed to other hazards such as traffic related and playground hazards.

The researcher had originally intended to have two groups of adolescent mothers and two groups of adult mothers to see whether there was any difference in the risk factor perceptions between older mothers and younger mothers. But the difference in age of the respondents between adult and adolescent mothers was very small, so the researcher felt that the results would not be a true reflection of the two categories of mothers and therefore decided against doing it. The small difference in age could be due to the fact that mothers with only one child were selected for the study. Most of the older mothers who were approached at the CHC had more than one child and this did not fit the criteria for the study.

5.3. Data collection

Focus group discussions were the means of data collection used for this study. Focus groups reach areas that other methods often cannot reach. Studies using focus group discussions have been successful in eliciting more detailed experiential information and identifying barriers to safety measures (Simpson *et al*, 2003; Aitken *et al*, 2004; Roberts *et al*, 1995). Focus groups settings have been shown to aid spontaneity and create a more naturalistic and socially contextualised environment by reflecting the way in which people perceive, experience and understand the world around them (Finch & Lewis, 2003). The strength of this technique is that it enables a group of people to share their views in a non-threatening environment, with the aim of learning about the factors that influence a particular action or attitude (Greenbaum, 2000). The effectiveness and synergy of group dynamics is valuable because the respondents can build on the ideas of their peers. It can also empower respondents to be more open about their perceptions, being encouraged by what the other respondents are saying because they will feel less alienated (Kitzinger, 1995).



The recruitment of respondents and data collection took place in July 2004. The researcher was the principal facilitator of the focus group discussions. The assistant facilitator was the Health Promotion Officer at the Delft CHC. An audiotape recorder was used to record the proceedings. The respondents were provided with soup and each one was given a food hamper (which was donated). The researcher had recruited 8 mothers for each group but not everybody turned up for the focus groups. Four focus group discussions were conducted each with 6, 5, 3 and 5 respondents respectively. Each focus group took place on a separate day with a day's break in between for the researcher to do some initial analysis to check whether any changes had to be made for the future groups. An interview schedule was designed, in consultation with CAPFSA, to guide the discussions based on the objectives of the study. The schedule was also informed by what was found in the literature.

Mothers were approached at the baby or paediatric clinics of the Delft CHC to ask if they were willing to participate in the study. Arrangements were made regarding the most convenient time for the discussions to be held, which took place at the Delft CHC. The discussions took place in Afrikaans, the language most widely spoken in Delft. It was felt that this would make them feel more comfortable in communicating with one another and with the facilitator. The facilitator was bilingual in English and Afrikaans and there was therefore no need for an interpreter. The respondents were also asked to complete a form requiring demographic information (See Appendix 4).

The researcher first gave an explanation of the purpose of the study and how the findings would be used. In order to first make the group feel at ease, the researcher started off the groups by asking the respondents what it felt like being a mother for the first time. This relaxed the respondents as they started speaking freely and sharing experiences with the other respondents who were also first time mothers. It was made clear to them that they did not have to talk about their own experiences with their child if they did not want to, but that they could relate other people's experiences if they wanted to. The researcher felt that by doing this, the respondents would not be obliged to disclose their own decisions regarding injury risks.

5.4. Validity

To improve validity, the discussions were taped and then transcribed by an outside source. The facilitator then read through the transcripts while listening to the tape recordings to check for accuracy. An assistant facilitator was also present to observe and took detailed notes especially on what could not be captured on the tape (such as body language and facial expressions which can influence analysis), which were then compared to the transcriptions. A brief overview of the session was presented to the respondents at the end of the discussion in order for them to reflect on and

confirm their views and also provided them with an opportunity to make any other suggestions. This is a form of respondent validation. A debriefing session (which was also tape-recorded) between the facilitator and assistant facilitator took place immediately after the group discussion to summarise key ideas. A representative of CAPFSA also reviewed the transcripts. The categories and themes that she came up with, was compared to those of the researcher to see whether they corresponded and any disparities were also discussed.

5.5. Data analysis

Data analysis ran concurrently with data collection so that the researcher could constantly review and reflect on data collected. She looked for emerging patterns, then further looked for new insight and patterns in subsequent data collection. The strength of qualitative research is that it remains open to analysis at all points in the research process (Gifford, undated). According to Neuman (1997) "... analysis is less a distinct final stage of research than a dimension of research that stretches across all stages". The data collected was analysed through thematic content analysis to identify themes and patterns that emerged across and within the groups. These data were coded and categorised and analysed. The themes are illustrated with direct quotes from the discussions. The analysis was discussed with the researcher's supervisor as well as the representative of CAPFSA.

6. ETHICS

Approval for the study was obtained from the City of Cape Town. The aim of the study was explained to the respondents and permission was sought from them to tape record the proceedings. The respondents were notified that participation was voluntary and that they could withdraw at any time if they wished to do so. It was also explained to the respondents that they could use pseudonyms but that confidentiality could not be guaranteed due to the nature of the focus group.

7. LIMITATIONS

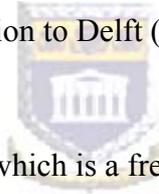
There was one Xhosa-speaking mother in the first focus group. She was not able to partake fully in the discussion because she could not understand or speak Afrikaans. Even when the facilitator translated for her, she still just answered the questions asked by the facilitator and did not respond further. It was then decided by the facilitator to exclude Xhosa-speaking mothers from future groups, as it would impede the flow and spontaneity of the focus group discussion. The implication of this is that this study was not able to inform on the perceptions of the Xhosa speaking mothers. It will therefore not be known if the prevention strategies based on this study's findings will be appropriate for them as well. It would be useful to conduct a similar study in the Xhosa-speaking community before embarking on prevention strategies. There are much fewer people of other language groups and therefore it would not be practical to study all these groups individually.

The one problem with focus group discussions is that there is always the chance that all the respondents might not turn up as was noted above. The researcher needed 5 respondents per group. To be safe, the facilitator approached 8 mothers for each group. Only 3 respondents turned up for the third focus group discussion but the facilitator nonetheless went ahead with the discussion and still managed to gain valuable information from them.

Qualitative research cannot be generalised in a statistical sense. As Lewis & Ritchie (2003: 269) state, "...it is not the prevalence of particular views or experiences, nor the extent of their location within particular parts of the sample, about which inferences can be made." They claim that it is the content of the range of views and experiences and the context that influences them, that can be inferred to the research population. The present study will thus be able to generalise at the level of categories, concepts and explanation of the problem of unintentional childhood injuries facing mothers in Delft.

8. SITE INFORMATION

Delft, a low income peri-urban area in the Western Cape Province, was established in 1989 by the former House of Representatives (which represented the “coloured” people in the old apartheid era) to provide affordable housing to people who were on the housing waiting list in the Cape Metropolitan Area .The people on the waiting list qualified for loans according to their earnings and the loans were provided by the National Housing Board. Construction started in Voorbrug, Roosendaal, The Hague and Eindhoven. The new Housing Act was passed in 1994 and the remainder of Delft was taken over by the Integrated Serviced Land Project. The difference between the old Housing Act and the new one is that the people are receiving a subsidy which they do not have to pay back, rather than a loan, as in the past which they had to pay back over a certain period. The construction of Delft South was started in 1996 based on the new housing policy (City of Cape Town, 2004). Leiden is the most recent addition to Delft (See Appendix 1).



The average house in Delft is 30 sq. meters, which is a freestanding brick structure. The house has only one room with a sink in one corner and a toilet (See Appendix 2). The inhabitants have to partition the room themselves if they want separate rooms. The energy source for cooking, heating and lighting is mainly electricity. Most people have access to a public telephone if they do not a telephone in the house. The majority of residents have piped water inside their houses as well as flush toilets.

The majority of Delft inhabitants speak Afrikaans, but Delft South also has a large Xhosa-speaking community. In 2001, Delft had a population of 606763. The 0-4 years age group is the largest after the 5-19 years age groups. The highest level of education of the inhabitants is grade 8 (6968) with half of that amount having no schooling (3834). The unemployment rate in Delft is 43.7% as compared to City of Cape town, which is 29.2%. The majority of people in Delft (23.7%)

earn between R1601-R3200 per month. There are 21.5% of the inhabitants who have no income (STATSSA, 2003). These statistics are from the 2001 Census, which did not include Leiden at the time.

9. SOCIO-DEMOGRAPHIC CHARACTERISTICS

The average age of the 19 respondents was 20.7 years ranging from 16 years to 35 years with half of them being under 20 years. Their children's age range from 3 weeks to 3 years with an average age of 12.8 months. They were all unemployed except for two who were on maternity leave. Only one was still at school. For half the respondents their mothers or parents were their main source of income. Four of the other respondents received the child support grant, which served as their main source of income. Five respondents said that their main source of income was their child's father. Two of the other respondents said that their child's father supported them financially only when he was able to do so.



The respondents' education levels ranged from grade 8 to grade 12. Only two of the respondents were married and lived with their husbands. The rest resided with their mothers or parents. The number of people in the house ranged from 4 to 10 in three of the groups. The researcher realised that this was important data as it was mentioned as a risk factor by the respondents of the original focus group and therefore added this to the questionnaire for the subsequent focus groups (See Appendix 3 and 4).

10. RESULTS

This section provides a description of the perceptions of the respondents on risk factors. Firstly, the themes around the socio-economic environment will be described and then the social and

behavioural factors will be discussed. This will be followed more specifically by a description of the different types of injuries and how they are perceived to occur. What emerges is how all these different issues are inextricably linked. The section concludes with a description of the actions the respondents would take to prevent the injuries.

The facilitator first asked the respondents what they understood by the word "accident" so that she could be sure that everybody had clarity on what it meant. They all agreed that it was unintentional but preventable although some respondents said that it was not always avoidable, such as with falls. The facilitator then used the word "accident" during the discussions as it is a more familiar word to the respondents rather than "unintentional injury" - as is preferred in the literature.

All the respondents identified the most common types of injuries (the word injury/injuries appearing subsequently in this paper refers to unintentional childhood injury) that could occur to children in the home to be falls, burns, drowning, electrical shock, poisoning, cuts, choking and suffocation. They were acutely aware of the causes of these injuries and they were very forthcoming with their perceptions of the risk factors leading to these injuries.

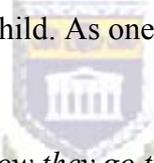
10.1. RISK FACTORS

10.1.1. Socio-economic conditions

Given the poor socio-economic status of most of the people in Delft, it is not surprising that the respondents perceived the main risk factors to be socio-economic factors such as unemployment, low income, overcrowded homes and houses that were too small.

10.1.1.1. Unemployment and low income

As noted above, only two mothers were employed, although they were on maternity leave at the time of the focus group discussions. One adolescent mother still attended school. The others were all unemployed. When asked if they would like to be employed they all answered affirmatively. They said that they would then not have to rely on other people as a means of income. However, some of them said that they would only go and work once their child was older. They felt that if the child was older, they could educate the child about safety, so that the child would be better equipped to handle hazardous situations by himself/herself. When they were probed further about this issue, some of them said that they did not feel that their young child would be completely safe from injury at a crèche. One respondent related about a death of a child at a crèche. They were also reluctant to leave their child with somebody else to look after because they did not know if that person would take full responsibility for the child. As one respondent said:

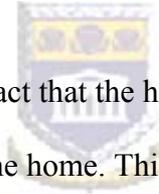


"I give my child to somebody to look after. Now they go to the park with the child and it gets injured. Even if you trust the person, you don't know if that person is prepared to look after your child all the time."

Most of the respondents were reliant on their parents (mostly their mothers) as their main source of income. Some of them received a child support grant. Most of them said that the fathers of their children supported them financially when they could. The majority of the respondents found that having a low income was stressful. They would worry about whether there would be enough money to buy food or other necessities for the child. Some of the respondents acknowledged that sometimes their attention was not on their child when they were stressed but most of them emphasised that they did not take their frustrations out on the child.

10.1.1.2. Physical environment

Low income was also perceived as affecting the physical environment. The respondents expressed concern at not being able to afford electricity at times, therefore having to use paraffin stoves to cook on, having to use candles for lighting and making fire to keep warm, all of which are hazardous to children. One respondent also remarked that some people could not even afford a cupboard to store hazardous items away. Another respondent mentioned that some people could not afford to buy locks for cupboards or safety covers for electrical sockets so that it could not be accessible to young children. They were also concerned about the electrical sockets that were too low. They felt that it was too accessible to small children. They were aware of faulty electric wires which could cause burns or shock. They spoke about children falling out by the door because there was no gate across the door.



The respondents were unanimous about the fact that the houses in Delft were small and felt that this was a major contributing factor to injury in the home. This was especially relevant where the children were poisoned because they had easy access to the poison agents because there was no safe place to put them. As one respondent commented:

"The houses in Eindhoven are very small. There isn't always place to put things away but this does not mean that people are not negligent and just leave things lying around! We are also not always privileged to put locks on the cupboards."

One respondent complained about her child not being able to move around the house with her walking ring because the house was too small. The child kept bumping into furniture and knocking her head. All of the respondents had their children sharing their beds with them. When they were asked why they did this, some of them said that the rooms were too small for a cot.

Overcrowding was a big concern to the respondents. As one respondent remarked:

"Because the houses are too small for a lot of people and a lot of children...you cannot keep things safe because there is just not enough place to put everything away."

They felt that even though they themselves might take safety precautions in the house, the other members of the house might not do the same. One respondent mentioned that conflict could also be a risk factor when there are other people in the house. She spoke about the other people in the house fighting, which could put the child at risk of injury, even if it is unintentional. The respondents also related that often there are other children in the house who could expose their child to injury. Maybe there are younger siblings or other siblings' children living in the same house, or even neighbour's children coming to play. As one respondent related:

"My small brother was sitting on the bed with the other children and eating bread. He noticed the baby on the bed and put some bread in his mouth."



10.1.1.3. Maternal education and knowledge

It is stated in the literature that the educational level of mothers could be a risk factor to unintentional childhood injuries. When this was put to the respondents they were adamant that this was not true. They felt that even if they did not have higher education, they would still know how to keep their children safe because they would still be able to acquire safety knowledge from people around them and from experience.

Only one respondent said that she would have liked to have had a higher education which she felt would have resulted in a well-paid job. She said that she would then have been able to afford a bigger and better house and buy safety equipment to keep her child safe.

The respondents agreed that lack of knowledge on how to keep a child safe, on the part of the mothers, was also a risk factor. One respondent admitted that new parents are often "careless" because they still have to gain knowledge seeing that they were parents for the first time. The respondents said that they acquired their knowledge on child safety mainly from their mothers. As one respondent admitted:

" My mother will give me advice and tell me how to go about doing something for my child."

The respondents also felt that they learned from the media such as television and radio, from pamphlets and posters at the health facilities and from talks that are occasionally given by health workers. Some of them also mentioned that they gained knowledge through experience by looking after younger siblings or older sibling's or other family's children. One mother suggested that by her child getting hurt, she would be able to prevent it from happening again because she would then have knowledge on how to prevent it. The question of punishment also came up. One respondent said that she was told that she should leave her child to get injured when he did something that he was not supposed to do so that he "could learn a lesson" and he would then not attempt to do something like that again. She said that she did not agree with this. She said she would rather explain to her child that what he was doing was wrong and what the consequences would be.

The respondents also felt that mothers were not always aware of the different stages of development of a child and the dangers that can go with it. They referred to a baby rolling off the bed because the mother did not realise that the baby was at that stage already. They also felt that mothers needed to know how to discipline their children because they felt that if children were disciplined from small then they would listen to the advice of adults and therefore be safer.

10.1.2. Child characteristics and development

Many of the respondents used words such as "naughty and "wild" to describe children and as the reason for getting injured. As one respondent said:

"Look! a child is naughty ... if you tell the child not do something or go somewhere, you just turn you back and the child will do precisely just that. That is what a child is about!"

The respondents felt that children were also naturally curious and experimented. One respondent advised that a mother has to be careful what she does in front of the child such as cutting something with a knife or a mother doing washing, as the child will most likely imitate her. Another respondent commented:

"Often when you have finished washing the nappies, then you go and hang it up but you forget that there is still water in the bucket. Remember, this can be dangerous because the child saw what you were doing. Now he goes and plays with his hands in the water like he saw you doing. He can lose his balance and fall into the bucket of water and drown."

The respondents felt that because children wanted to explore, they could be exposed to hazards. As one respondent mentioned:

"They go and scratch in cupboards. Maybe the "Jik" or washing powder is there. They don't know what it is, but we as parents should know..."

The different stages of child development and the mothers' awareness of these stages were also perceived as risk factors by the respondents. As one of the respondents explained:

"...especially when a child just starts walking, then he can get very hurt because he is still clumsy. Maybe he stands up against something but loses his balance and falls."

They also believed that young children could lose their balance when running or lose control and therefore run into a wall or furniture. One mother also queried whether falling was not just part of development. The respondents also realised that children liked to climb onto things

such as the kitchen table or chairs and could then fall off. Some of the respondents were concerned about the effect of the television wrestling programme on children. As one respondent remarked:

"I'm talking about the wrestling now...like many children play...they will take a pillow and press it onto another child. They do not intend to hurt one another but they can suffocate!"

10.1.3. Issues of supervision and neglect

The respondents all felt that lack of supervision or inadequate supervision was a major risk factor. They agreed that children were exposed to all types of injuries because there was no one to watch them all the time. Some respondents said that a child should be watched twenty-four hours a day, but others responded that this was not realistic. One respondent had an almost fatalistic approach:

"I know you are supposed to keep an eye on your child twenty-four hours a day but the mother might just be in the toilet and something can happen to the child."

Another respondent said resignedly:



"You have to do your home chores...okay. Now you put your child down and he crawls. When I am busy here I can't see what he is doing there."

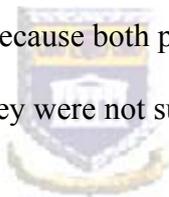
The respondents also stressed the importance of not leaving a child alone in the bath or near a bucket of water. The respondent who related the story of the child who suffocated in the refrigerator said that the incidence happened because there was no adult supervision. Some of them also spoke of inadequate supervision even when an adult is present. As one respondent related:

"One day I went to town. My mother went to a friend. I think the lady smoked. When I came back I saw a burn mark on my child's hand. Sometimes my mother goes and visit and they get talking and she puts the child down to play. The child plays and sees a piece of glass or something and puts it in her mouth."

The respondents identified negligence on the part of the mother as well as of other people in the house as a risk factor. They felt that all types of unintentional childhood injuries in the home could be related to negligence. They spoke about mothers leaving their babies near the edge of the bed causing the baby to fall. One respondent spoke about a mother falling asleep with her baby while breastfeeding. She had placed the blanket over the child's face and the child had almost suffocated. The respondent felt this was negligence. Alcohol abuse was perceived as another reason for negligence and inadequate supervision.

10.1.4. Alcohol abuse

Alcohol abuse, which could also be a product of poor socio-economic conditions, was perceived across all groups as contributing to the problem of injuries to children in the home. They mentioned how children were left to their own devices because both parents were drunk. The children were thus exposed to all types of injury because they were not supervised. As one respondent related:



"I'm talking about my own family now... my brother and his wife drinks. Their children have to see to themselves. If they are hungry then they will cook something themselves."

One respondent also spoke about a mother who in her drunken stupor suffocated her baby by falling asleep on top of the baby. Some respondents, who stayed with their parents, were concerned about their babies when their fathers were drunk. As one respondent stated:

"I mainly look after my child, but when my father is under the influence, then my mother also helps to look after her. He can perhaps do something irresponsible... look, he's not sober! and does not always realise that there is a small child in the house now."

10.1.5. Maternal support

All the respondents agreed that they could rely on their mothers for support in all aspects of caring for their children. The younger respondents said that they did not have the expertise to look after their babies yet, but their mothers were always willing to guide them. They felt that their mothers not only gave them financial support but also emotional support. One respondent admitted that when she was feeling depressed or stressed, she could leave her child in the care of her mother. This means that she could rely on support from her mother in times of need.

10.2. CAUSES OF INJURY

10.2.1. Falls

The respondents agreed that falling was very common and at times was not avoidable such as when a child who just starts walking (which is part of child development) is prone to falling by losing its balance. They also commented on how children would climb onto anything to reach something that they wanted.

One respondent admitted that her child fell off a bench when she left her alone to hang up washing:

" She usually sits alone on the bench and she can climb up and down. I did not expect her to fall off."

Another respondent explained:

"Many times... they can topple over from climbing onto something small, like a can, to reach further up. Like this they can even fall out of the window!"

Other ways of falling such as falling from the top of a double bunk bed, tripping over toys were also mentioned. Causes such as extension cords lying on the floor as well as slipping on wet or polished floors, or objects left lying around which can trip children, babies rolling off the bed and babies being dropped (falling out of the carer's arms), could be linked to negligence on the part of adults.

10.2.2. Burns

The respondents were very aware of the causes of burns and recognised it as a major type of injury to children. The burning due to pulling on the cord of an electric kettle was frequently mentioned.

As one respondent recalled:

"My nephew is 4 years old. Now here is the fridge and the hot water kettle is on top of it. He walked past and pulled on the cord (of the kettle), which was hanging down. Immediately all three plugs came out of the socket and the kettle with the hot water fell onto him and he got burnt."

The respondents also spoke about scalding from hot drinks either by the child pulling the cup off from a table or while an adult was holding the child and having a hot drink in the other hand.

Another cause of burn was the hot stove. They said the child could pull down the pot with hot food or oil from the stove if the handle was within reach. They could also put their hands onto the hot plates of the stove. They were also worried about the child playing with the switches of the stove.

Hot water from the taps was another hazard to children. As one respondent related:

"... and then the aunt put the child in the water without feeling the water first. She thought that there was cold water in already but there was only hot water in and so the child burnt."

According to the respondents, other ways that children could burn were from playing with matches or lit cigarettes, heaters that are on, lit candles, which can perhaps set something, alight and open fires.

10.2.3. Poisoning

The poison agents mentioned by the respondents were mainly cleaning agents, rat poison, medicines/tablets and paraffin. The deceptive appearances of some hazardous substances were of great concern. They spoke about how children thought that tablets and rat poison were sweets and therefore swallowed them. They also mentioned cleaning agents such as "Jik", "Jeyes Fluid" and "Staysoft" which the children could also mistake for cooldrinks or the washing powder that they could mistake for "sherbet". As one respondent shared:

"My brother thinks that the "Pine", "Staysoft" and dishwashing liquid is cooldrink because of their colours."

One respondent said mothers might give their children the wrong medicine dosage by mistake and this could be harmful for the child as well. Inappropriate packaging or storage can also lead to unintentional injuries. Another respondent related:

"That time the electricity was cut off because it was not paid. Then we used the paraffin stove. The paraffin was in a cupboard under the sink in an old beer bottle, which you could not see through. Look, children are naughty! She drank almost everything up."

10.2.4. Drowning

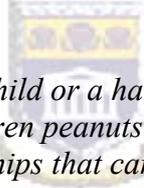
The respondents recognised the fact that drowning could happen in the home. According to the respondents the most common ways of drowning in the home were in the bath and in a bucket of water. As one respondent recalled:

"My child was one year old. I was busy doing her washing. My child was playing with my brother's children. When I looked again my child's head was under the water (in the bucket)."

Some respondents also mentioned drowning in the toilet. One respondent thought that open blocked drains could also pose a problem because a small child could fall in and not be able to get out again and could therefore drown.

10.2.5. Suffocation/Choking

The respondents talked about suffocation due to blankets or pillows covering the faces or the baby being placed on the stomach to sleep. Some of them also mentioned how a parent could lie over the baby when falling asleep in a drunken stupor. They also recognised that plastic bags placed over the child's head could cause suffocation. The respondents stressed the importance of burping a baby after feeding so that it does not choke when lying down. They all agreed that a child could choke on big pieces of fruit or food. One mother emphasised how dangerous certain edible goods were:



"When you give a packet of chips to a small child or a hard sweet, you don't know how that can choke a child! You also can't give small children peanuts or peanut clusters because they can also choke on it. Rather give them soft sweets or chips that can melt in the mouth."

Another mother was also concerned about the way children played that could lead to injuries. She referred to the wrestling programme noted earlier, about the children watching television and then imitating what they saw. She also related how a child suffocated in an abandoned refrigerator in their backyard, while playing hide and seek. This is where child characteristics come into play.

10.2.6. Electrical shock

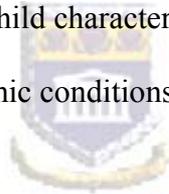
All the respondents agreed that the accessible electrical sockets were hazardous to children. They felt that due to the child's curiosity, it would put its fingers into the holes of the socket or push objects such as pens inside. They also mentioned electrical wires that were damaged or electrical

leads on the floor that could shock the child if it touched the wires especially if the child's hands are wet.

10.2.7. Cuts

The respondents recognised the main cause of cuts were children playing with sharp objects such as a knife, a razor or broken glass. They felt that children could be injured by cutting a finger with a knife or cutting a foot on a piece of broken glass. They thought that swallowing a sharp object could also injure a child.

All the causes of injury mentioned above are perceived to be linked to one or more of the risk factors mentioned earlier e.g. falls could be the result of child characteristics and development, whereas burns could be related not only to child characteristics but also factors such as negligence and lack of supervision or poor socio-economic conditions (the use of candles and paraffin stoves).



10.3. INJURY PREVENTION

When the respondents were asked how they would prevent the household injuries to their children, they spoke mainly about watching the child, being careful, keeping dangerous products and objects out of reach and teaching the child about safety when the child was old enough to understand. They also mentioned restraining the child in a pram or a walking ring. One respondent said that she would put her child to sleep before doing her chores.

The respondents in this study felt that awareness programmes and first aid training would be useful to all mothers and caregivers to improve their knowledge and skills on child safety in the home in order to prevent these injuries or how to respond to these injuries. As one respondent commented:

"When it happens (the injury) then we as parent don't know what to do. We give mouth-to-mouth (resuscitation) but it might not be done properly. Now when we come to the Day Hospital then perhaps the child is already dead."

They felt that awareness programmes could be implemented in the community by holding meetings at such as schools and clinics. One mother also suggested home visitation from community health workers to see if the houses were "childproof", which the other mothers also agreed with.

It was encouraging to note that some respondents felt that they had gained more knowledge just by participating in the focus group discussions which is consistent with what was found in a study in India by Sehgal *et al* (2004) who were assessing the knowledge of parents regarding childhood injuries. For example, when the causes of burns were being discussed, one respondent spoke about the dangers of first pouring hot water into the bath when another respondent admitted that she did not realise that this was hazardous.



11. DISCUSSION

A complex range of factors contributes to the occurrence of unintentional injuries, ranging from parental knowledge and safety behaviours to the physical and psychosocial environment (Evans & Kohli, 1997). The fact that the respondents thought that accidents were preventable and mostly avoidable means that they do not think that accidents just happen and are due to chance. This is consistent with what Eichelberger *et al* (1990) recorded when they assessed parental attitudes and knowledge of child safety. For the most part, the respondents saw themselves as being knowledgeable about the causes and risk factors, as well as how to prevent the injuries but they were not always in the situation to prevent the injuries due to circumstances beyond their control.

11.1. Socio-economic conditions as risk factors

It has been demonstrated in many countries that whether in terms of income, education or occupation, that members of advantaged groups tend to have better health than other members of their communities (Laflamme, 1998). Laflamme (1998) found in a study comparing families in less affluent and more affluent areas, that the two groups had similar ideas about home safety and safety behaviour but the authors thought that the less affluent parents may be faced with greater environmental hazards, which make unintentional injuries more difficult to prevent. They do not have the means to rectify the situation.

In keeping with global studies, (e.g. Petridou & Tursz, 2001; Reading *et al*, 1999; Laflamme, 1998) and with what was found in South Africa in local studies done in low-income areas, which found that risks of injury are due largely to their environment (Swart & Seedat, 2001), it is clearly evident from the current study that the socio-economic conditions that the respondents find themselves in, are perceived to be major contributing factors to injury risks. Importantly however, is the fact that the risk factors due to socio-economic status seem to be the factors that the respondents have least control over personally.

When people are aware that risks exist but have no means of removing or avoiding them, they are prone to anxiety and a feeling of resignation, which can be mistaken for complacency (Roberts *et al*, 1995). Poor parents have many other demands besides looking after their children such as anxiety about the availability of food and having to consider other people in the house and this can result in them being overburdened and torn between responsibilities, as was clear from the current study. The fact that the respondents in this study said that stress did not affect the way they cared for their child is difficult to believe. Stress and anxiety can be debilitating, which can affect an individual's judgment and impair their safety routines (Roberts *et al*, 1995).

The respondents admitted that they were stressed at times when they had no money because they would then be concerned about the welfare of their child. Only some of them received a child support grant of R170 per month. One respondent had no identification document, which is one of the prerequisites to be eligible for a child support grant. The others did not seem to be clear about the issues on the child support grant because they said that they had applied but they were turned away. The social services authorities need to educate the public about the criteria for the child support grant. Although this grant alone will not solve the mothers' income problem, it will at least give her some peace of mind that she has this regular income every month.

Due to the large proportion of unemployed people and the low income of most people in Delft, it seems that they can only afford the small houses offered to them. These are generally overcrowded, as family and extended family all tend to stay in the one house. The overcrowded conditions subsequently lead to the risk factors associated with unintentional childhood injuries. This is consistent with the findings of Gielen *et al* (1995) who studied the role of parental beliefs, barriers to injury prevention and housing quality. They found that low income, poor housing quality and high barriers (all indicators of poor socio-economic conditions) significantly interferes with a mother's ability to practice injury prevention strategies.

The overcrowded conditions of the present study's subjects, is definitely seen as an obstacle to the mothers' practice of safety behaviour. They try their best to keep their child safe, but the next person in the house does not always consider the dangers or just does not care, making it beyond the control of the mother. Here the behaviour of the other members of the house also becomes a risk factor as was claimed in this study, such as them leaving matches or cigarettes within reach of the child.

In keeping with the findings of Laflamme (2001) and Philippakis *et al* (2004) who found that average income is a more powerful inverse predictor of unintentional childhood injuries than educational level, the respondents felt confident that they were as capable of caring for their child as a person with a higher level of education. This means that they did not seem to have a problem with not having higher education because they were confident with their knowledge on child safety. Contrary to Girasek's (2001) finding, there seems to be the misconception that education will not lead to increased knowledge. It also did not seem to occur to them (apart from one respondent) that having a better education might empower them in taking better care of their child because she could have a good job and therefore afford adequate child care and a safer environment for her child.

The awareness of the need to work is there, but the safety and security of their children seem to be a major concern to the respondents. They felt that their children were safest if they care for the children personally. It seems that they would rather compromise their living standard for the safety of their child. This is almost contradictory, because if the mother improves her standard of living, it would relieve some of the burden of caring for her child and keeping the child safe. There also seems to be a paradox with the respondents saying that they have family support but they still feel they cannot trust anybody else to look after their child as was illustrated where the child was injured when looked after by the grandmother.

11.2. Social environment as risk factors

The respondents were very concerned about alcohol abuse. Children often are innocent victims of adults who abuse alcohol. The role of alcohol abuse should not be underestimated in unintentional injuries such as burns, falls and drowning (Parry *et al*, 1996). Alcohol abuse as a risk factor is again out of the control of the mother. When other members of the household drink, apart from supervising and protecting her child, the mother herself cannot do much about changing the

situation. When the parents of children have a drinking problem (as was mentioned in the present study), then the family can become dysfunctional which can lead to increased risk of injury to children because the children are not provided with a safe physical and nurturing environment and are left to their own devices (Bijur *et al*, 1992).

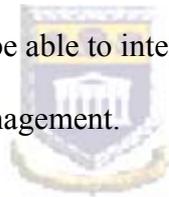
One respondent mentioned family conflict as a risk factor. However, it should be understood why the child is in danger of injury. It could be that the mother was not able to protect the child in the circumstances that she found herself in. In a prospective study done by (Harris & Kotch, 1994), the major finding was that the more family conflict, the more unintentional injury to infants.

Conflict can also arise when other members of the household have their own ideas about child safety contrary to what the mother might want to practice. Limbo *et al* (2003) cites a good example of a grandmother contradicting a public health nurse about not placing a sleeping baby on the stomach. The grandmother exclaimed that she had done this with all her children and nothing had happened to them. Her daughter had just kept quiet through the altercation. This could also be a typical scenario with the respondents in the current study. They all live with other people in the house and they rely heavily on their mothers for support and child rearing knowledge. Even if the children's mothers have the appropriate knowledge, they might be forced to follow the advice of others in the house to avoid conflict. It is therefore essential that the social environment be assessed before designing injury interventions. Future research could be conducted on the effects of the behaviour of the other members of the household on unintentional childhood injuries.

Research has shown that adolescent parenting is associated with a range of difficulties such as coping difficulties (is she emotionally and cognitively mature? Will she be able to tackle the many challenges that come with raising a child?), to economic hardships (Gulotta & Finney, 2000; McCormick *et al*, 1984). According to the literature, being a single mother (which is often the case

with adolescent mothers and is certainly the case in the present study) also adds to the risk of injury to children (Roberts & Pless, 1995; Ringback Weitoft *et al*, 2003).

Contrary to what is reported in the literature, the perceptions of the respondents in this study were that the young age of the respondent and her single status were not risk factors. This could be due to the fact that all the adolescent respondents lived with their mothers. The adult respondents who were not married also lived with their mothers. The respondents perceived that the child was their main responsibility but that they could rely on their mothers for support in coping and caring for the child. It releases some of the stress that they would otherwise have been burdened with. If the adolescent mother lives with her parents, then there are other people, apart from herself who could intervene to prevent injury. However, problems may arise if the parents of the adolescent mother are mainly responsible for the child because then she might lose the opportunity to learn about the development of her child and she might not be able to intervene in future risky situations as she cannot intervene in the child's behaviour management.



The relationship of adolescent mothers and poor socio-economic status is well described (Roberts & Pless, 1995; Ringback Weitoft *et al*, 2003; Lopez Turley, 2003). In the study by Lopez Turley (2003) comparing children of siblings, they came to the conclusion that it was the young mother's poor family background and not age that put her child at a disadvantage. This could most likely be the case in the present study as well, because the adolescent respondents mostly did not lack the knowledge on injury risks and they had their mother's support. It is thus more likely that the factors related to the poor socio-economic status of the respondents contribute to the risk of unintentional childhood injuries than the age of the mother.

Although most of the respondents said that their children's fathers were supportive emotionally and financially if they were by the means, there seems to be a belief that the child was mainly the

respondent's responsibility. They did not seem to see the necessity for the child's father to play a big role in the child's life. This gives the impression that the respondents also do not trust the father to care for the child. This is of concern because it means the respondent does not share the responsibility of caring for the child with the father. Being solely responsible for the child could lead to stress and anxiety for the mother, which could then be a risk factor for injury to the child. Jaffe *et al* (2003) conducted a meta-analysis of studies dealing with non-resident fathers and children's well-being and concluded that children had fewer behavioural problems when fathers paid child support, and when fathers were more authoritative. However, they also found that in the home where the father engaged in anti-social behaviour, the children had the worst behavioural problems. There is a need to make the community aware of the importance of the role of fathers in child safety as well as child well-being in general, if he does not engage in anti-social behaviour such as abusing alcohol or drugs.



Roberts & Pless (1995) found in a study on lone mothers in Britain, that the increased injury rate for children of lone mothers could be explained by the poverty, poor housing conditions and social isolation of lone mothers. Poverty and the poor housing conditions are definitely perceived to be risk factors in the current study, but social isolation does not seem to be a factor, as the respondents seem to have enough support. This could be because there is such a high rate of single and adolescent mothers in the community that it is almost seems a norm. They therefore do not feel isolated within the community. This is in keeping with the findings of a study by Vundile, Maforah *et al* (2001), who explored the risk factors for teenage pregnancy among sexually active adolescents in Cape Town. The authors thought that the teenagers had the perception that it would not be a problem to become pregnant because everybody else was pregnant as well, it was therefore a normal situation.

One problem that has come up is that none of the adolescent respondents in the present study, except one, have given a thought to going back to school. It seems that they have resigned themselves to living the way they are doing at present although they did seem to have aspirations for their child when they said that they wanted their child to have a better life than theirs. It could also mean that there was no one to care for the child if the mother had to attend school. This could be due to the fact that the mother does not trust anybody to care for the child (except for their own mothers who is perhaps working) or coming back to socio-economic status, that she can simply not afford childcare.

11.3. Child development and characteristics as risk factors

The respondents perceived child characteristics and development as important risk factors. They were mostly aware of the different stages of child development and the hazards that go along with them. This awareness could be due to the fact that they have had experience because of these types of injuries occurring to other members of the family i.e. a sibling's child, or by caring for a younger sibling. This is consistent with the study of McClure-Martinez & Cohn (1996) comparing adolescent and adult mothers' perceptions of hazardous situations for their children. They found that the expectant adolescent mothers with childcare experience would more likely intervene in a hazardous situation than those with no experience.

However, it is still important to reinforce appropriate messages to mothers about the different stages of child development. They should be made aware of the hazards that accompany the different stages as well as all the consequences related to it because child development is so dynamic. They must also be made aware that when they think that a child is "naughty" or "wild", it might just be that the child is being curious and exploring as part of normal development. Gulotta & Finney (2000: 31) so appropriately state: "Ideally, a balance must be achieved between supervising the

child, teaching a child about injury prevention, and acting in a way as to promote a child's psychological growth." A mother should realise that a child needs to take some risks to develop new skills and abilities (Roberts, 1996).

Many unintentional childhood injuries that were mentioned in the current study, such as falls, burns and poisoning, can be attributed to child characteristics and development. The pre-school child cannot take responsibility for its own safety and children under 3 years cannot usually understand that something is dangerous. Small children do not know the difference between safe and unsafe behaviour (CAPFSA, undated). Mothers sometimes underestimate their child's ability to do things and forget how quickly they learn new skills. Young children are naturally curious and want to explore their environment. Small children explore by touching, by mouthing objects and tasting. This is when children are at danger of being poisoned, burnt or choking. Small children have a very poor sense of taste and smell (CAPFSA, undated). The 3 to 5 year old child likes to imitate adults and therefore will also be in danger of injuries due to cuts and burns (Wilson *et al*, 1991). They could easily drink paraffin thinking that it is water or cooldrink if stored in a cooldrink bottle. According to CAPFSA (undated), the highest proportion of children burnt, are children under 5 who are not able to help themselves.

The respondents frequently mentioned children falling and bumping into things when they just start walking and also about climbing onto things to explore when they are a bit older. It must be realised that as children grow older, their exposure to risk increases because in the process of development the child's physical growth and motor skills are not matched by the understanding and appreciation of hazards (Abboud Dal Santo *et al*, 2004). One danger though is that mothers might relax their safety behaviour as the child grows older (Morrongiello & Kiriakou, 2004).

Consistent with previous research showing that mothers of older children believed in teaching their children (Garling & Garling, 1995), the respondents in the present indicated that as their child grew older, they would educate their child about safety behaviour. However, as the mother's behaviour changes from protection to education, she might overestimate her child's cognitive abilities. The mother has to make sure that the child understands rules and the child must also understand why the mother is laying down the rules. Most of the respondents said they would educate their child about the consequences of the injury before it happened. It was shown that children rapidly gain knowledge on health and safety between 3.5 and 5.5 years of age (Mobley & Evashevski, 2000). Morrongiello *et al* (2001) claims that increasing children's knowledge and awareness of safety does not always serve a protective function. They must know how to act on this knowledge and understand the safety issues in relation to it.

The question of the benefit of injury to a child was discussed. Some respondents felt that children could learn from an injury event because they would then avoid that risky behaviour in the future. This is consistent with what Lewis *et al* (2004) and Morrongiello & Dayler (1996) reported when they assessed parents' beliefs about the development benefits of childhood injuries. Mothers will have to weigh the advantages and disadvantages of these different approaches to injury prevention before making decisions. If she decides that the child needs to be reprimanded, she might not take the necessary precautions to minimise the potentially dangerous situations that the child might come across, thus exposing the child to potential injury.

11.4. Supervision as a prevention strategy

In keeping with what Garling & Garling's (1993) study showed, the respondents felt that supervision was an effective way of reducing risk to unintentional childhood injury. This could be because they felt that they had more control when they were supervising the child and could

therefore anticipate if there was any threat of an injury-causing event. This means that the mother perceives the risk of injury will be lower if there is more supervision. What the respondents meant by supervision is watching the child. However, many children still incur injury when being supervised. Consistent with what was found in a study by Peterson *et al* (1993) involving parents, social service workers and medical personnel, most respondents felt that pre-school children needed constant supervision. When considering the circumstances of the respondents (other chores and responsibilities), this safety behaviour is not an easy task as it not always possible to supervise the child all the time.

It is clear that the respondents preferred direct supervision as a way of keeping the child safe. They were not comfortable with delegated supervision unless it was the respondent's own mother. What mothers need to be aware of is the fact that the mother might be in the same room but still not give adequate supervision as their attention might be elsewhere, as was alluded to by some respondents.



The different factors such as the presence of potential hazards in the room (e.g. a hot cup of tea on the coffee table), feasibility of supervision in the room, the development stage of the child (e.g. a crawling child would need more supervision than a baby) and the activity of the child (a small child who is watching television will not need as much supervision as a child who is busy cutting papers with a scissors) needs to be looked at when considering supervision, as was concluded by Garling & Garling (1993) and Saluga *et al* (2004).

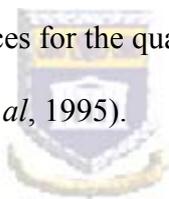
The danger of supervision is that the mother might think that if she supervised the child, then it would not be necessary to take precautionary measures against controllable hazards (e.g. she leaves the hot drink on the coffee table, instead of putting it out of the reach of her crawling child because she feels she is there to watch the child). Greaves *et al* (1994) found that there was an inverse relationship between supervision and controllable hazards. This is confirmed by Morrongiello &

Kiriakou (2004), who found that assumptions that supervision is a reasonable substitute for other precautionary measures is unfounded, seeing that injuries to toddlers happen mainly in the home where they are supposed to be supervised. The perception that vigilance is sufficient becomes a risk factor to injury. Eichelberger *et al* (1990) were concerned about a disturbing finding which showed that the high reliance parents placed on vigilance was an incorrect way of keeping children safe. However the respondents in the current study might not be able to change the hazardous environment and therefore have no choice but to supervise the child to the best of their ability.

12. CONCLUSIONS AND RECOMMENDATIONS

It is apparent from the current study that unintentional childhood injuries are a hazard to children's health and welfare. This however is not the full extent of their impact on social well being.

Unintentional injuries have many consequences for the quality of life of the individual and the communities in which they occur (Roberts *et al*, 1995).



The current has found that the risk factors perceived by the respondents are mainly those beyond their control e.g. the small houses and many of the factors involving the social environment. It is clear that a multi-faceted integrated approach to injury prevention is needed for the complex problem of unintentional childhood injuries in Delft. When designing intervention programmes, the WC DOH should take into consideration that mothers are mostly aware of the potential risk factors. The problems are therefore not of ignorance or apathy but rather of difficulties in implementing safety measures due to their social and personal circumstances. What needs to be explored with the mother are the risks that she is concerned about, what the barriers are to avoiding these risks and what support can be offered to her so that tailored interventions can be planned. It must be remembered that knowledge does not always determine one's behaviour. Roberts (1996: 56) admits:

"Sadly, we know that the links between knowledge and behaviour are by no means straightforward."

Caution must be taken when designing publicity campaigns and educational material to enhance people's awareness of risks, assuming that they will then practice safety behaviour. They might not be able to practice a particular safety behaviour due to some of the factors mentioned above, but they could nevertheless become anxious because they could not implement the safety behaviour being promoted (Roberts *et al*, 1995).

If local people themselves make suggestions, then there is a much better chance of the programmes being successful. The respondents in the current study suggested that home visits should be conducted. Such programmes were found to be successful interventions in injury prevention (Gulotta & Finney, 2000; Hammond-Ratzlaff & Fulton, 2001). Trained community health workers could conduct these visits. With the initial visit, they could go into homes and check if the house was childproof and assist with childproofing if necessary. They could also have awareness programmes as well as education on how to change the behaviour of the members of the household, because these members are capable of putting the child at risk to injury.

The home visitor would be in a good position to observe the social as well as physical environment. Tailored interventions could thus be designed specific to that household because the content of the safety promotion advice will take into account the context in which the behaviour of the mother and the child takes place. Home visitation should not only be limited to one visit. A single home visit was proven to be insufficient to influence the long-term adoption of home safety measures (King *et al*, 2001). Education of the normal development of the child and how to manage the child's behaviour to reduce risk of injury should be ongoing with periodical visits to the home as well as

reinforcement of educational messages. Mothers need to be made aware that the environment that was safe for a child at three months might not be safe to that same child a few months later.

The request for first aid classes by the respondents was encouraging and should be pursued. Classes could be arranged for mothers at the clinics by organisations such as St John's ambulance services, who do training in first aid. It is important to take time and childcare issues into consideration when planning these classes because these classes have to be accessible to the mothers. Considering the high rate of adolescent pregnancies, first aid instructions and injury prevention messages should also be incorporated into the high school curriculum as part of life skills orientation. This could also benefit the older children who have to care for their younger siblings.

Existing programmes such as the Integrated Management of Childhood Illnesses and health promotion programmes should integrate injury prevention programmes. Mothers bringing their children to clinics should be made aware of the hazards of the different development stages of a child and how to prevent injuries at these different stages. Pregnant mothers attending antenatal classes should also be targeted for injury prevention messages. It might be better if advice on injuries is given on its own as well. The mothers might be more receptive to this tailored advice than if it was given in general with other child care advice.

The crèches in the area as well as any childcare centres also need to be visited to check if they meet all the safety requirements needed for childcare. The staff should be encouraged to go for first aid and injury prevention training. The crèches should also make sure that they bring it to the community's attention that their facilities are indeed safe for their children. This might then encourage mothers to leave their children at the crèche and go out and look for employment. The commercial businesses in the area could be encouraged to subsidise the crèches so that they could be more affordable to the community.

Alcohol abuse is clearly a concern that came out of this study. A programme needs to be put in place urgently to address this issue. If there is a programme in place already, it does not seem to be having the desired effect and therefore needs to be revised. An intersectoral approach, involving health and social services as well as the community in initiatives such as the Sensible Drinking Project will have to be considered when dealing with this problem. Perhaps, if the parents were made aware of the dangers that they exposed their children to, they might be more amenable to behaviour change than if they were made aware of the harm to themselves only. Alcohol abuse is related to violence and injuries such as traffic injuries (Parry *et al*, 1996). However, the researcher of this study did not uncover literature on the effects of alcohol abuse on unintentional childhood injuries and therefore suggests that more research needs to be conducted on this issue.

During the Child Accident Prevention Week posters are put up and pamphlets are distributed at health facilities. At some facilities there are health promotion officers to answer any queries by the public. Messages are distributed via print media as well as the radio and television. Some safety programmes are also run at targeted schools by CAPFSA and the fire department (personal communication with N. Du Toit - assistant director of CAPFSA 10 November 2004). However, this event takes place only once a year. Reinforcement and repetition of safety messages is very important but must also be included with other safety promotion strategies such as environmental changes e.g. better housing construction.

Apart from awareness programmes and educational interventions for behaviour change, it is imperative that those involved with injury prevention need to build healthy alliances with other sectors of government such as social welfare, education and housing so that changes can be made to the social and physical environment. However, injury prevention practitioners should also engage

with the community so that their needs and concerns are taken into consideration when planning programmes. The community will also be able to make constructive and practical suggestions regarding injury prevention in a realistic way because they are aware of the local context in which injuries can happen and what could possibly be done to prevent injuries. Policies for injury prevention should therefore be based on local knowledge for them to be effective. Health workers need to have ongoing training in injury prevention and also be made aware of its advantages, not only to the children and their mothers, but also to themselves as service providers. They are in a good position to become advocates for child safety and so decrease the burden and financial costs on the healthcare system.

The inclusion of accident prevention in strategies for the health of the nation and more specifically children will certainly bring to the fore the “neglected disease” of our society. This study concludes that those in power should acknowledge that child safety is a social value and not just something that parents need to be concerned with.



It is hoped that with the aid of the findings of this study and the above recommendations, the WC DOH will be able to design appropriate injury prevention programmes.

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