THE EFFECTS OF WAR ON CHILDREN:
AN ECOLOGICAL INTEGRATION.

by

Chandima Fernando

A thesis submitted in conformity with the requirements for the degree of Master of Arts, Department of Human Development and Applied Psychology, Ontario Institute for Studies In Education of the University of Toronto

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The Effects of War on Children: An Ecological Integration.

Master of Arts, 2000

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ABSTRACT

The purpose of this study was to extend Elbedour, Bensel & Bastien’s (1993) model of development for children of war to an actual population. This research aimed at rectifying the lack of comparative analysis within war literature, constructing upon it through inclusion of the variable culture. The frequently overlooked Sri Lankan population was examined, investigating children exposed to various war traumas, including war orphans and refugees, children orphaned for reasons other than war and a comparison group. Measures of cognitive maturity, interviews and observations were used to understand the children’s ecological environments and their role in mitigating effects of war. Results revealed that children who appeared most adjusted, performing more successfully on cognitive tests resided in ecologically stable environments, characterized by healthy, interactive relationships across all subsystems. This was in contrast to children who appeared maladjusted and unable to complete the cognitive tests, whose ecological environments reflected social insolation and impoverishment across all subsystems.
ACKNOWLEDGMENTS

This research study is dedicated to my parents, Christopher and Tilak Fernando whose love, faith and courage in the face of my joys and adversities has never been taken lightly.

I would also like to express special thanks to Sasha, Chrishan and Lisa, who, at my roughest moments carried the burden of my disillusion and pushed me towards truth.

To Dr. Richard Volpe, Dr. Carol Musselman and Susan Elgie, I would like to convey my deepest gratitude for their patience and gentle wisdom throughout the entire thesis process. Their guidance and confidence in my research was unfaltering and for this I will always be indebted.

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Special thanks goes to the late Parakrama Jayasinghe, Mayanthi Jaysinghe, Theera Fernando and Hema Abeygunawardena who fostered me as though I was one of their own.

Finally, my heart, oh restless ocean, for when I felt most bereft, you found something worthwhile in me. Breathe.

*Data gathered for this research project was collected in accordance with the ethical guidelines, under the auspices of the Family Rehabilitation Centre, Sri Lanka.
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CHAPTER ONE
Introduction

1.1. Personal Reflections:

During 1992 I travelled to Sri Lanka with my family for the purpose of discovering my familial roots and history. Born abroad in Canada, the trip held a great deal of promise for my parents whose intentions were to instill in us a sense of the rich culture and diversity their tiny homeland offered. While visiting family and friends and being shuttled from one significant site to another, the seed for my research interest was planted. Contrary to the anticipation of my parents, it was not the regular ancestral sites that offered new vistas of purpose for me. Instead I was captivated by what seemed commonplace on the streets and within the communities: specifically the presence of beggar children and orphans. As an outsider from a first world nation, the concept of children without homes or families would have normally created tremendous despondency within me, yet, as a person within the context I was filled with a strange sense of optimism for these children. Despite their obvious losses in life, these children seemed happy and resilient. How could this be? This was the inception of my desire to demythologise and deconstruct my presentiments of these children.

As my stay in Sri Lanka progressed, the trips from religious site to religious site, slowly merged with visits to orphanages and areas where I knew I would meet children of the street. Despite concerns about troubling family and friends to take me on these outings, I quickly realized that it was with ease that they incorporated me into something that was simply a part of their lifestyle. For example, when travelling to the market, they would drop off portions of their purchases for the orphans, left over meals would be parcelled up and given to the street children, while during religious offerings, whole meals would be prepared. The most striking example of their involvement with these children happened on two occasions when friends had children celebrating birthdays. Though from different families, each child gathered half the money they received as gifts and donated it to orphanages. As well, each family spent the evening of their child’s birthday preparing, serving and feeding meals personally to the orphans.

By the end of my visit I was overwhelmed by the generosity and kindness of the culture I had experienced. Not only did it leave me with the wish to immerse myself deeper, but it also fostered a curiosity about the effects of such interactions. These simple gestures of consideration
and compassion seemed to me to have a very immediate and direct effect on these children. I began to question, however, if the effects were possibly two-fold, with the later effects projecting into the children’s future. One year later I decided to trade my parent’s practical sense of security for an investment in education; I had sold my dowry in order to fund my trip to Sri Lanka.

By the time I had arrived in Sri Lanka, the internal conflict had had a devastating impact, not only on those that were part of the military, but on civilians as well. Through networking previous to departing from Canada, I was accepted to work for the Danish Organization “Family Rehabilitation Centre” (FRC) whose mandate was to aide torture and trauma victims of the war. Due to my interest in working with orphaned children, I was quickly assigned a position amongst a multi disciplinary team, travelling not only to orphanages but to refugee camps within and around the Colombo region. Although I worked in conjunction with doctors, psychologists, and physiotherapists, my time was spent primarily with social workers and play therapists within a play therapy program. The focus of the program was on helping children externalize war trauma through various modes of play, while also providing social support for their caregivers. This program, I felt provided a natural springboard from which to launch my research. Within the parameters of the program I was able to gather quantitative data and through journalling observations and conducting interviews I gathered qualitative data.

In 1996 I was presented with the opportunity to travel back to Sri Lanka to gather additional data. I was thrilled with this prospect as it allowed me not only to broaden my participant pool, but to refine areas of the study I was not satisfied with during the 1994 expedition. The changes involved the addition of the Ravens Coloured Progressive Matrices and interviews with various participants. Overall I felt that the 1996 visit allowed me to enhance the data that was gathered in 1994, making for a richer, more comprehensive study.

1.2. Literature Review

There has been an increasing awareness surrounding war and its effects on people. Although the majority of past research has focussed on the impact of war on soldiers, there has been a growing interest in comprehending the experiences of civilians who are caught in the middle of war zones. (Elbedour, Bensel & Bastien, 1993). Since World War I, the causalities suffered by civilians has increased from 5% to about 90%, with the majority affected being women and children (Raundalen & Melton, 1994). This drastic increase in children's involvement in war related trauma has been cause for understanding not only the experiences of these children but
also their psychological ramifications.

An accumulating body of literature reveals that war experiences can damage a child's psychosocial development and future life expectations (Kuterovac, Dyregrov & Stuvland, 1994; Hjern, Angel & Hojer, 1991; Garbarino, Dubrow, Kostelnky & Pardo, 1992). The effects of war can manifest as cognitive, behavioural and emotional disturbances. Studies show that exposure to war can result in nervous, aggressive, regressive and depressive behaviours (Chimienti, Nasr & Khalifer, 1889), physical manifestations, such as eating and sleeping disorders, somatic problems (Ajdukovic & Ajdukovic, 1993) and possibly the development of Post Traumatic Stress Disorder (Hjern, et al., 1991; McCloskey, Southwick, Fernandez- Esquer & Locke, 1995).

Although these research findings concur that war can impact the development of a child, there are discrepancies in the research regarding the level of effect war has on a child's well being. Discrepancies can be due, in part, to the various kinds of stressors to which the child is exposed and how they are defined. For example, 'danger' and 'loss' are broad categories that change not only from one war to another, but also from one region of conflict to another region of the same conflict (Kuterovac et al., 1994; Chimienti, et al., 1989).

Discrepancies in the literature can also reflect differences in the theoretical viewpoints of the researchers. Studies dealing with children and trauma reveal two predominant views; resilience and damage (Elbedour, et al. 1993) The proponents of the resilience argument believe that children have an incredible resiliency when enduring traumatic events which allows them to incorporate trauma into their lives with less disturbances than would be anticipated (Garmezy & Rutter, 1985; Garbarino et al. 1992). Unlike the proponents of the resiliency argument, proponents of the damage position believe that experiencing trauma can impact on a child's developmental trajectory, in terms of short and long term disturbances.

Another problem with the literature is that many studies document mental health problems of children of war but few compare children exposed to various kinds of trauma as well as comparing them to a control group (McCloskey et al., 1995; Hjern et al., 1991). Past research has mainly examined particular groups of at risk children independently. For example, studies that deal with refugees of the war, (Hjern, et al. 1991; Ajdukovic & Ajdukovic, 1993), children who have immigrated due to persecution (McCloskey, et al. 1995) and children in general who have endured war (Garbarino et al. 1992). Although valuable information has been gathered this way, it is important to study these groups comparatively. By defining and categorizing the stressors
children endure during war, it is possible to do comparative studies, thus making it possible to examine the impact each type of experience has on development. For example, by classifying children of war into 'displaced' and 'orphaned', it is possible to examine the impact of each experience independently and to compare them with normal development.

When examining the impact of various war traumas on children, it is important not only to look at the children and the stressors they face, but to also examine the environmental contexts in which they exist. By studying their environment, a better understanding of the impact of war can be gained. Children, their environment and the stressors they face should not be examined separately. Rather they should be regarded as a part of a dynamic process of mutual accommodation, where the child and the environment are both reciprocally active (Bronfenbrenner, 1979). It is through this reciprocity that the variety of developmental patterns can emerge. One model that incorporates this perspective is the ecological model for development.

Within the ecological model of human development, the environment is conceived as a nested order of concentric structures, each enclosed within the next. The innermost structure is the developing child, who is then surrounded by increasing social structures which are referred to as the micro, meso, exo and macrosystem. These systems can refer, respectively, to a child's family, school, institutions that the child is indirectly affected by, such as school boards and the culture in which the child is embedded. (Bronfenbrenner, 1979).

When examining children of war from a dynamic perspective, using well defined stress factors, it may be possible to understand why some children cope better than others, demonstrating high levels of psychosocial resilience while others are left with long term trauma that surfaces in a variety of cognitive, behavioural and emotional problems (Elbedour et al., 1993).

Although a body of research dealing with the effects of war on children exists, much of the literature is focussed on various aspects of the developmental consequences from exposure to trauma, with little or no ecological integration. Past literature has often looked at the impact of fragmented family lives, personal loss and interactions with peers (Garbarino et al., 1992) but the literature rarely extends beyond this to the culture and the environment within which the children are dynamically imbedded (Elbedour, 1993; Chimienti et al., 1989).

A theoretical model proposed by Elbedour et al. (1993) examines children of war from an
ecological perspective. This model is based on Belsky's (1980) work with maltreated children. Grounded in the ecological model of development by Bronfenbrenner (1979), Belsky's (1980) model suggests four main forces that interact to determine maltreatment of children in society. These forces include the child, family, community and culture in which these forces are embedded. These systems refer respectively to the child’s ontogenic development, microsystem, exosystem and macro system (Bronfenbrenner, 1979). Belsky’s model (1980) was further extended to understand the effects on children who are exposed to war. The dimension that was added to the model is the level of intensity, duration and suddenness of conflict (Elbedour et al., 1993).

When looking at developing children as they interrelate in the family (microsystem), research has shown that the effects of trauma on development can be minimized if the child feels secure. According to Bowlby (1969) the quality of relationship that evolves between children and their caregivers serves to provide the foundation upon which mental and emotional states are built. If children feel content and secure with their attachment figures, cognitive and emotional development can progress smoothly. If however, children feel insecure in their environment or with their caregivers the possibility for mental distress and behavioural problems increases (Bowlby, 1951; Greenberg, Speltz & Deklyn, 1993; Rutter, 1985).

During war, children's reactions and ability to cope with trauma have been found to be conditioned to a large degree by their parent's reactions and ability to cope. This interactive process often results in the emergence of similar patterns of effect for both children and their parents (Solomon, 1942; Chimienti et al., 1989). The relationship between children and the microsystem in which they exist therefore shapes how they cope with war.

The effects of war on children are also influenced by their participation in an exosystem (community). Some factors within communities that are important to a child's development are school teachers, day care providers, peers and anyone that can fulfil the role of a caregiver when an attachment figure is unavailable or incapacitated (Garbarino, et al. 1992).

According to Elbedour et al.(1993) schools, day cares and other institutional communities offer a place where a caregiving environment can be fostered. It has been found that within these environments children can become involved in caregiving relationships that can then be used to buffer traumatic events (Elbedour et al., 1993; Tizard & Rees, 1975). Not only can children engage in relationships with adult caregivers, but peer relationships can be used as a source of
community and a means of mitigating trauma's effects. Children who have lost families through war can use institutions as surrogate families, where the children support one another (Sterba, 1949).

Research has also shown that children who lose their parents can become attached to institutions and use this to buffer trauma. It is not the caregivers within the institution to which the children have become attached, but the institution itself. Through this attachment, children have been able to cope more effectively with their environment (Weininger, 1972).

For children of war, this active relationship with the community can help initiate the atrocities experienced. Since many children of war are placed into institutions, for example orphanages or refugee camps, it is imperative that the effects of institutionalization be understood.

The final structure that encapsulates the lower order structures is the macrosystem, or the culture to which a person belongs. Research has rarely focussed on the influence that culture has on children of warring areas. Culture is important because it forms the underlying belief, religious and ideological foundations that underlie a society. Culture governs the way in which the people within a community interact, which in turn effects the developing child. It is important to look at culture in order to know what type of relationships will be formed and how people interact.

The fifth dimension that was added in the model proposed by Elbedour et al., (1993) involves the duration, frequency and intensity of war. These factors play a profound role in the effects of trauma on psychological development. For example, there is a difference between chronic and acute danger as experienced in war. Acute danger is a traumatic event that occurs in a regularly safe environment, whereas chronic danger occurs when traumatic events occur serially over extended periods of time (Garbarino, Kostelny & Dubrow, 1991). By understanding these factors, it is possible to see the how the effects can differ accordingly.

From the review of the literature it is clear that there is a need for increased understanding of the effects of war on children. Although there is a large body of literature that focuses on the consequences of war, the results reveal discrepancies that may be due in part to lack of adequate definitions of the stressors, lack of comparative analyses between groups who have endured various kinds of traumas, as well as lack of control groups. Many studies of children of war look at the experiences of children in a limited way, for example, either alone, within a family, or
sometimes within a community. Very little research examines the impact of the culture the children live in. There are no studies that examine these children using an applied ecological model. The literature that has used an ecological model has only conceptually applied it to previous studies and has not used it directly to examine a target population. Although important groundwork has been laid by past research, it is important that steps be taken to diminish the discrepancies that exist in literature.

This study will examine the effects of war on children using the ecological model of development as outlined by Elbedour et al. (1993). Although this model has previously been applied only in review of past research, the purpose of this study is to extend this model to an actual population of children of war. The populace that will be examined has not been researched extensively. This population consists of children, ages 3-13 and their caregivers, who have endured the atrocities of the ongoing internal war in Sri Lanka. The study will include a comparison group and children who have been exposed to various types of traumas.

The children to be examined form four groups that are divided according to the trauma they have endured. The first group is the comparison group. These children come from intact families, who were drawn from a Montessori school in the Capitol city, Colombo, and have been exposed to acute danger (occasional bombings or raids on the city). The second group are children from a Buddhist orphanage in Colombo. These children have been orphaned for reasons other then the war and have also been exposed to acute danger. The third group consists of orphans of the war. These children were abandoned in the jungles of Northern Sri Lanka, where the majority of warring occurs, and were brought to a Buddhist orphanage in Colombo. These children are torture and trauma victims and have been exposed to chronic danger. The fourth group of children consist of refugees. These children were displaced from their homes in Northern Sri Lanka and were forced to walk through the jungles to Colombo during the most intense period of warring. These children were gathered from refugee camps throughout the Colombo region. They are also torture and trauma victims and have been exposed to chronic violence. Refer to Table 1 for a summary of participant status and trauma endured.
Table 1: Family Status and Exposure to Trauma

<table>
<thead>
<tr>
<th></th>
<th>Intact Families</th>
<th>Orphans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to Acute Danger</td>
<td>Urban</td>
<td>Non- War Orphans</td>
</tr>
<tr>
<td>Exposure to Chronic Danger</td>
<td>Refugee</td>
<td>War Orphans</td>
</tr>
</tbody>
</table>

Through the application of an ecological model, these four groups of children will be analysed as a part of a dynamic system, which includes families or substitute attachment figures, community and culture. Since culture is a pertinent factor that is frequently overlooked, efforts will be made to analyse the effects of war on children with the variable of culture in mind. The fifth dimension of frequency, intensity and duration, as suggested by Elbedour et. al., (1993), will be examined with each specific group.

The effects of war on children's development will be examined through both quantitative testing methods and qualitative methods. Cognitive maturity will be assessed through the use of projective drawings and the Raven's Coloured Progressive Matrices (CPM), while a phenomenological understanding of the life worlds and emotional states of the participants will be gained through participant observation in the form of a personal journal in conjunction with in-depth interviews with informants representing each target group.

It is predicted that the overall results of the drawings and the CPM gathered from the comparison group will show the highest scores, due to the fact that these children come from intact families and attend school regularly. It is believed that these two systems will provide a secure environment for the developing child, which will act as a buffer for the acute trauma to which they are exposed. The children from the comparison group belong to a culture where Buddhism is practised regularly. The regular adherence to Buddhist practices, where reciprocity is key, is hypothesized to offer further stability for these children.

It is hypothesized that the children who were orphaned for reasons other than the war will perform only slightly poorer than the comparison group. Despite their loss of caregivers and family, a surrogate family will likely have been established at the orphanage. These children also attend school together and so a sense of community will have been established. The Buddhist beliefs of this orphanage also provide an environment of security for these children that when added to the other factors, is believed to help buffer them from the effects of the acute trauma they have endured.
It is hypothesised that the orphans of the war will score slightly lower on the tests than the other two groups, but will not be drastically different. Like the other orphans, these children can use their institution and peers as attachment figures. They can use their school to foster a sense of community and their Buddhist religion may foster a secure environment. It is proposed that they may show slightly more social-emotional disturbances due to the exposure to chronic trauma.

It is predicted that the refugees will perform the most poorly on the tests as they would be dealing with more trauma than the other children due their displacement. Some of the refugee children will have lost personal possessions, friends, family members and caregivers. Those who have not lost caregivers will be living with caregivers who will probably be dealing with their own loss. These children would be living in camps where there is little sense of security. They will most likely not be attending school because their presence in the camps is transitional. The culture in the camps may be conflicting due to people of different classes (upper, middle and lower class people) having to share small living spaces. These class differences could result in ideological, educational and religious differences which could create further conflict. Since these children will often be lacking a stable caregiver, family unit, school environment and a consistent cultural structure in which to embed themselves, they will cope least well with the chronic trauma to which they have been exposed.

As previous literature states that boys are often exposed to more war related incidences and are sheltered less from the effects of war (Elbedour, et. al., 1993. Kuterovac, et. al., 1994. Macksoud, 1992), it is believed that within all groups, boys will perform more poorly on the tests of cognitive maturity and will be reported and observed to display more disturbances in social emotional functioning.

Since a review of previous studies show that older children have more exposure to war trauma, thus potentially increasing levels of distress (Macksoud, 1992, Kuterovac, et. al., 1994, Kuterovac, et. al., 1994), it would seem plausible to expect older children to perform more poorly on tests and to appear less well adjusted than their younger counterparts. Counter to these arguments however, it is asserted that there will be no effect of age on the children’s ability to perform on the cognitive measures since the older children from each group would have had periods of stability preceding exposure to the war, in which their environments would have offered security through family, school and community relationships, in combination with the lifestyle habits pervasive within the Sri Lankan culture. These assumptions are in accord with
attachment theory, which proposes that individuals form internal working models of themselves and attachment figures based on previous experiences within this caregiver-child relationship (Ainsworth, Blehar, Waters & Wall, 1978, Bowlby, 1969). This representation in turn is believed to form a cognitive working model of relationships, encoded with aspects of oneself, expected behaviours of others and emotional facets implicit in relationships. Although these models are modified by further developmental processes and experiences, later models that emerge cannot be conceived independent of the initial model, as it is through this initial model that situations and relationships are construed (Bowlby, 1973). Based on this theory, no effects due are age are anticipated.

It is posited that the data collected from the qualitative sources will enhance and elucidate the findings from the quantitative analysis, showing that the children who have scored the highest on the tests of cognitive maturity and who appear the best adjusted will reside in the most ecologically stable environments, while the children who perform the most poorly on the tests of cognitive maturity and who appear the least well adjusted will reside in more ecologically unstable environments. It is proposed that these qualitative data sources will allow for illumination of the environments the children reside in, exposing care-giver child, family, community and cultural systems that exist within Sri Lanka.
CHAPTER TWO
Methods and Procedures

2.1. Focus:

This study will examine the effects of war on children using an ecological model of development, as outlined by Elbedour et. al., (1993). Although this model is applied in review of past research, the purpose of this study is to extend this model to an actual population of children of war. This study aims to rectify the lack of comparative analysis that has been done on children of war and the lack of proper definitions. The comparative analysis will include three study groups of children who have been exposed to various types of traumas and one comparison group.

Through an application of an ecological model, these four groups of children will be analysed as dynamic systems, which include families or substitute attachment figures, community and culture. Since culture is a pertinent factor that is frequently overlooked, efforts will be made to analyse the effects of war on children with the variable of culture in mind. The fifth dimension of frequency, intensity and duration, as suggested by Elbedour, et. al (1993) will be examined with each specific group.

The effects of war on children’s development will be examined through the use of the Goodenough- Harris Projective Drawing Test and the Ravens Coloured Progressive Matrices, in which scores for cognitive maturity will be secured. Qualitative data in the form of a journal and personal interviews will be used to compliment and elucidate the quantitative findings. Through this data insight into the children’s social-emotional functioning will be gained, allowing for a more holistic perspective of the children’s life worlds and contexts. It is postulated that through the use of these quantitative and qualitative methods, the effects of war on a child’s development will be measured, with children from the most ecologically stable environments securing the highest scores on the tests cognitive maturity and displaying the least amount of social-emotional disturbances, and the children from the most ecologically unstable environments receiving the lowest scores and displaying the most social-emotional disturbances.

2.2. Participants and Setting:

This study was conducted in Sri Lanka in two phases, with data being collected between May and June 1994 and in August 1996. A total of 180 participants were involved in both phases. (104 girls, 72 boys and 4 women) The participants were all from Sri Lanka and were of
Singhalese or Tamil descent. The participants ranged between the ages of three and sixty-two and were chosen from four institutions in which the researcher carried out work as a volunteer.

1) The first institution was a formal Buddhist Montessori Preschool in which all of the students were Singhalese and came from intact families. In conjunction to this additional data with these children, interviews with four of the children’s caregivers and teachers were conducted in phase two of the study.

2) The second institution was a Buddhist Orphanage for Singhalese war orphans.

3) The third institution was a Buddhist Orphanage for Singhalese orphans that were orphaned for reasons other than the war, for example financial reasons.

4) The fourth group consisted of four refugee camps. Each camp was a mixed religion refugee camp for Tamil Sri Lankans who were displaced from their homes in the Eastern province due to the internal conflict. The participants from the Tamil Sri Lanka refugee camp that were involved in phase one of the study were unavailable for research in phase two due to closure of the camp.

Qualitative data in the form of journalling and researcher observations were conducted with all four groups as well as with three other refugee camps in which the researcher volunteered.

In addition to the Goodenough- Harris Drawing Tests and the CPM, six participants were interviewed during Phase Two of this study: four adults and two children. Each participant was selected through the theoretical sampling method, in which each participant was consciously chosen to be studied based on their potential for developing new insights and expanding on information that was already gained (Taylor & Bogdan, 1984). The participants were chosen such that each group studied in 1994 was represented and so that insight into the typical Sri Lankan lifestyle could be gained. The teacher of the children from the Montessori school, Srikanthi, was chosen as the informant for the comparison group, Lilani, an active volunteer teacher from the regular orphanage was chosen as the informant for the regular orphans, Maya, a volunteer for the FRC, was chosen as an informant for the war victims. Maya was also chosen as she was the grandmother of Malindha and Manika, brother and sister informants from the comparison group. Malindha, Manika and Maya, in conjunction with Preethi, Maya’s daughter and Malindha and Manika’s mother were chosen specifically as informants as it was believed that valuable insight could be gained from having an intergenerational family perspective on various social phenomenon in Sri Lanka. For an overview of the total number of participants involved in Phase
1 and 2, refer to Table 2.

**Table 2: Breakdown of Total Children Involved in Phase 1 & 2.**

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number Of Children Phase 1</th>
<th>Total Number of Children Phase 2</th>
<th>Total Number of Adults Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A: Control</td>
<td>16</td>
<td>33</td>
<td>1</td>
</tr>
<tr>
<td>Group C: Regular Orphans</td>
<td>15</td>
<td>45</td>
<td>1</td>
</tr>
<tr>
<td>Group B: War Orphans</td>
<td>19</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Group D: Refugees</td>
<td>22</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>108</td>
<td></td>
</tr>
</tbody>
</table>

Total Participants Phase 1 and 2 combined = 180

**2.3. Measures: General Considerations**

Due to the personal history and cultural background of the children participating in this study, it was crucial to find testing measures that would not penalize them for differences in language and culturally bound experiences. Past research on non-English speaking children propose has often utilized projective drawings as a means for examining development broadly and directly. Drawings are believed to be a vehicle for self expression between an examiner and a child who is unable or unwilling to verbalize their experiences (Klepsch & Logie, 1982). Like language, projective drawings can be analysed in different ways. They can be assessed in terms of structure, quality and content. These drawings can reveal both cognitive and emotional states of the child (Koppitz, 1984).

For children of war this method of examination can be a very effective tool for understanding the impact of trauma. It is beneficial because it requires no verbal communication and is unobtrusive. It is an activity that is universal and can therefore be applied with little difficulty to children cross culturally. Since projective drawings can be scored for mental and emotional maturity, they can provide comprehensive information about development.

Another culturally reduced means of studying children’s cognitive states is through figural matching, akin to puzzles. The Raven’s Progressive Matrices is the most commonly used of this type of test. With this form of testing, the child’s clarity of observation and level of intellectual development can be assessed. Through board pieces which can be visually or manually manipulated, verbal instructions can be pantomimed easily, reducing the effects of
language differences (Raven, Court & Raven, 1977). Due to its nonverbal nature and its relative lack of cultural bias, the Ravens can be an effective means of testing children of war.

Although the use the standardized tests can reveal valuable quantitative data, the addition of qualitative data can add depth and scope to research findings (Creswel, 1992). In contrast to quantitative research, qualitative research is a different form of inquiry that allows for a more comprehensive view of the life worlds created by individuals. Primary to this method of research is understanding and explaining the meaning of social phenomenon, with as little disruption to the natural setting as possible. Unlike quantitative research, which is interested in taking apart phenomenon in order to analyse component parts, qualitative research can reveal how the parts work together to create the whole. Due to its focus on process, meaning and understanding, the product of qualitative research is richly descriptive, with a design that is emergent, flexible and responsive to changing conditions of a study in progress. It is designed to inductively construct rather than test concepts, hypothesis and theories (Bogdan & Taylor, 1975, Merrian, 1998, Maxwell, 1996).

Within qualitative research, the researcher is the primary instrument for data collection and analysis. In order for data to be collected, the researcher must engage in fieldwork, where people, places and institutions are visited for observation to occur. This technique not only provides an opportunity for the researcher to become intimately familiar with the phenomenon being studied, but also allows for responsivity and consideration of context, adaptation of techniques, sensitivity to nonverbal aspects, and clarification and summarizing of data (Merrian, 1998).

Although there are many different forms of qualitative research, participant observation and open-ended interviews were used here in order to acquire an in-depth understanding of situations and their meaning for those involved. Grounded in real life contexts, observation and open ended interviews result in a rich and holistic description of phenomenon, offering insight and illumination of meanings that broaden the researcher's understanding. Insights gleaned from this method can then be used inductively as tentative hypothesis to help structure future research (Merrian, 1998).

As seen in previous qualitative research, it is possible to capture a rich experiential understanding of the effects of war on children by conducting observations and in-depth interviews (Garbarino et al. 1992; Raundalen & Melton, 1994; Rosenfeld, 1993 Hjern et al
1991). Although these studies provide considerable insight into the social worlds of children of war, they did not incorporate either children of war from this study’s target population, nor do they take an ecological approach differentiating and comparing children that had been differentially affected by the atrocities of war. This study uses qualitative methods to examine children of various war traumas and their ecological environments.

Within the present research, both quantitative and qualitative data sources were triangulated. The means of collecting quantitative data in the most culturally reduced and language free manner were through the Goodenough- Harris Projective Drawing Tests and the Raven’s Coloured Progressive Matrices. The qualitative data sources included a personal journal and interviews with the participants. Through this approach it became possible to produce results that not only had a firm grounding in literature, but captured a personal voice in which an understanding and discovery of social phenomenon could be gained. The specific tools used to secure the data will be outlined briefly in order to examine their relevance and applicability to the research.

**Goodenough- Harris Projective Drawing Test:**

For this study, children’s development was examined through the use of the Goodenough- Harris Projective Drawing Test, in which the participants were asked to draw a picture of a man and a woman. The Goodenough- Harris Drawing Test is a brief nonverbal test of intelligence that can be administered individually or to a group. The purpose of the test is examine the child’s ability to form concepts of an abstract character. This ability involves perception (discrimination of likenesses and differences), abstraction (classification of objects) and generalization (assigning newly experience objects to the correct class). Evaluation of the human figure drawing serves as a means of measuring the complexity of the child’s concept formation ability. The human figure is used because it is considered the most significant figure for a child. Within the scoring system, each body part or specific detail is rated absent (0) or present (1) and a total score is determined. (Sattler, 1992).

Overall, the advantages to this projective drawing test are its nonverbal nature, adaptability to group administration and ease with which it is integrated into a battery of tests. Additionally, this test is a useful screening measure of cognitive ability with ethnic populations as it may not be as culturally loaded as other tests (Sattler, 1992). It was for these reasons that it was a test of choice when examining this study’s target population. The Goodenough- Harris
drawing test was administered in both Phase One and Phase Two of the study.

**Ravens:**

Although the projective drawings that were administered in Phase One and Phase Two of this study provided a vehicle for self expression and allowed for insight into the cognitive and emotional states of the children studied, it was felt that the addition of another quantitative measure would strengthen the findings of this study. As the Ravens Coloured Progressive Matrices (CPM) is a nonverbal test of reasoning ability based on figural stimuli, it became the measure of choice.

Generally, the CPM is a useful measure of intelligence based on figural reasoning only. It measures the ability to form comparisons, to reason by analogy and to organize spatial perceptions into systematically related wholes. For children 5 to 11 years of age the CPM book form of the Ravens Progressive Matrices is ideal as bright colours are used in this form to attract and hold the attention of the children. In each form, the child is presented with a matrix-like arrangement of figural symbols and must complete the matrix by selecting the appropriate missing symbol from the group of symbols (Sattler, 1992).

The advantages to this test is that it is a nonverbal, can be administered individually or in a group, is easy to administer as the instructions can be panto-mimed and it is culturally reduced. It is for these reasons that it was applied as an additional source of data in Phase Two of this study.

**Journal and Interviews**

For this research study participant observation and interviews were employed. Participant observation is characterized by a period of intense social interaction between researcher and participants, within the milieu of the later, and allows data to be gathered systematically and unobtrusively (Bogdan & Taylor, 1975). Due to its informative nature, participant observation was recorded through the use of a daily journal. This journal was kept by the researcher, recording observations of physical settings, participants, activities and interactions that were encountered during the researcher’s work period. Through the documentation of this data, an opportunity to learn and formulate hypothesis about the situation for subsequent fieldwork was provided.

Building upon the data gathered from the participant observation, qualitative research was later conducted in the form of interviews. An open ended interview using a narrative approach
was applied. As the interviews were fundamentally exploratory and the researcher was mainly interested in having the participants define their life worlds, a more open ended and less structured interviewing approach was applied (Merrian, 1998, Manning & Cullum-Swan, 1994). In conjunction with these interviews, participant observation was also documented.

By employing a qualitative approach, data that may not have been attainable through a quantitative approach was accrued. This design allowed the researcher a unique opportunity for maximizing the participants' contributions as well as getting an in-depth perspective of the various contexts and social milieus. Through this technique, rich robust information was gathered, greatly enhancing the findings from the quantitative aspects of the study.

2.4. Reliability and Validity of Responses

In an effort to obtain reliable and valid data the most culturally unbiased means of assessment were sought. Through the use of a combined design method, data sources were triangulated. As the basic assumption of triangulation proposes that any bias inherent in a particular data source, investigator and method be neutralized when used in conjunction with other data sources, investigator and methods, (Creswel. 1992) it was believed the risk of contaminating the results of the study by ethnocentric bias would be decreased, thus promoting overall reliability and validity. Each test will be discussed briefly in order to examine reliability and validity of responses.

**Goodenough-Harris Drawing Test**

A review of past studies indicates that the Goodenough-Harris Drawing Test is reliable (Median test-retest r = .74) providing stable scores (Scott, 1981). Interrater reliabilities are satisfactory (Median r=.90 for Draw- A-Man and r=.94 for a Draw-A-Woman). Studies indicate that the Goodenough-Harris Drawing Test effectively discriminates the performance of children at the age levels 5 through 12. It is, however, a relatively poor prognostic measure of scores on other intelligence tests (Median r = .49). Correlations with measures of achievement are also poor. **Ravens Coloured Progressive Matrices**

Split-half reliabilities range from .65 to .94 for the CPM. Test-retest reliabilities are adequate for each form, ranging from .71 to .93. The lowest reliabilities are for young children. The CPM has adequate concurrent validity as established by correlations with other intelligence tests and achievement tests. The populations studied include white, black, Mexican American, American Indian, deaf and developmentally delayed populations. Validity co-efficient with
intelligence test are in the .50's to .80's, while validity co-efficients with achievement tests are in the .30' to .60's. (Sattler, 1992)

Journal and Interviews:

Validity is heavily emphasized within the branch of qualitative research, with a methodology that allows researchers the opportunity to stay close to the empirical world. The methods within qualitative research are designed to ensure a close fit between the data and what people actually say and do, making it possible to obtain first hand knowledge of the social lives of participants which is unfiltered through concepts, operational definitions and rating scales (Taylor & Bogdan, 1984).

As this form of research does not necessarily follow standardized procedures, it is important that certain precautions and checks be made by researchers to ensure the reliability of their data recordings. These checks include beginning the data analysis as soon as the fieldwork and data collection are completed, clarifying points and loose ends with informants, having the participants read draft reports, and having a colleague read over the data, so that the findings of the researcher are confirmed and subtle aspects that may have escaped the researcher be noted (Taylor & Bogdan, 1984). These precautions and checks were applied in the present study in order to ensure reliability and validity.

2.5. Materials

Goodenough-Harris Drawing Tests

The equipment used for the Goodenough- Harris Drawing Test consisted of 1 Dixon Primary Printer #1-309 lead pencil, three pieces of blank, white 8.5 x 11 inch paper and one cover sheet per participant. The cover sheet was the projective drawing test record form. General information about the participant was recorded on this form (i.e., name, age, and gender of child, information about schooling and home residence.)

Ravens Coloured Progressive Matrices

For the Ravens Coloured Progressive Matrices, Book Form, 1 Dixon Primary Printer #1-309 lead pencil and one record form per participant was used. General information about the participant was recorded on this form.

Journal

Central to the qualitative research procedure, the researcher is the primary instrument for data collection and analysis. To gather this data, the researcher must place himself or herself
within the study in order to document observations. These observations were recorded by pen in a bounded 5" x 8" journal on lined blank paper. This data was later converted into computer format and printed text.

**Interviews**

Within this method, the researcher again is the primary instrument for data collection and analysis and must therefore be placed within the study. To gather this data, a more open ended and less structured interview was used, eliminating the need for a predetermined question format. The equipment used for conducting the interviews consisted of 1.60 minute micro-cassette per participant, one micro-cassette recorder. Observations and field notes were kept using a pen and 8 x 11" pad of lined blank paper. The interviews were then logged into a computer and translated into printed text.

**2.6. Procedure**

**Goodenough- Harris Drawing Test**

When administering the projective drawing tests at the various institutions, the children were told that a drawing activity was being conducted and they were invited to participate on a volunteer basis. The children were then placed in groups of eight, where possible. The drawing tasks were completed in an area that was familiar to the participants. For the orphans and the refugee participants, the drawing activity was carried out in a room of the centre in which they resided. The activity for the children at the Montessori school was conducted in a regular area of study. All of the drawings were completed during the early afternoon period to minimize confounds that could occur with time of day.

Before participation in the study began, a projective drawing test record form was filled out with the name and the gender of the child. This form was then used throughout the study to record any observations of the child. The remaining sections of the record were completed after the study was concluded.

The children were given a verbal set of instruction. These instructions were given in the mother tongue of the children, either through the researcher under the supervision of a translator or by the translator alone. In all cases, care was taken to ensure that the instructions remained consistent and concise. As the area in which the drawings were completed was often small, the participants were told not to look at the work of the others, but simply to draw what was instructed according to their perception of it. The children were then given a pencil and paper and
asked to draw a person. Upon task completion, the drawing was collected and another piece of paper was given to them. They were then asked to draw a person that was the opposite sex to the one they had previously drawn. When this second drawing task was completed, the participants were thanked and dismissed.

As recommended by the test manual, there was no specific time interval allotted for task completion. The participants were allowed to produce their drawings at their own pace. Completion for the two drawing tasks averaged about 15 minutes. During the task completion period the effects of the researcher were kept to a minimum by the researcher only giving simple instructions and minimal verbal help when necessary. Any observations were made in an unobtrusive manner.

**Ravens Coloured Progressive Matrices**

The children were told that a puzzle activity was being conducted and they were invited to participate on a volunteer basis. The children were then placed in groups of eight, where possible. The CPM task was completed in an area that was familiar to the participants. For the orphans, the CPM activity was carried out in a room of the institution in which they resided. The activity for the children at the Montessori school was conducted in a regular area of study. All of the testing was completed during the early afternoon period to minimize confounds that could occur with time of day.

Before participation in the study began, the CPM record was filled out with the name and the gender of the child. The children were then given a verbal set of instruction. These instructions were given in the mother tongue of the children either through the researcher, under the supervision of a translator or by the translator alone. In all cases care was taken to ensure that the instructions remained consistent and concise. As the area in which the CPM form was to be completed was small, the participants were told not to look at the work of the others. The children were then given a pencil and were administered the book format of the test. Each illustration was shown to each child individually until they had time to write down their answer. After the task was completed, the participants were thanked and dismissed.

There was no specific time interval allotted for task completion. Completion for the task averaged about 20 minutes. During the task completion period the effects of the researcher were kept to a minimum by the researcher only giving minimal verbal help when necessary. Any observations were made in an unobtrusive manner.
Journal

To gather qualitative data, the researcher must place themselves within the study, engaging in fieldwork, where the people, places, institutions of interest are visited in order to carry out observations (Merrian, 1998). As the researcher was still in the early stages of observations, and the study was essentially exploratory, field notes were kept on a daily basis. The journal was taken to the various orphanages and refugee camps in which the researcher worked, in order to immediately document observations and interactions with the residents and participants. The population, political history, living arrangements, facilities, support systems, and culture of the various institutions were recorded. At the end of each evening, these observations were read through and additional observations and thoughts were then recorded. This journal was later converted to computer format and printed text.

Interviews:

Each participant was contacted by telephone and was asked to participate on a voluntary basis in a short open ended interview. Each participant was ensured confidentiality regarding their disclosure. The researcher then travelled to the homes or institutions of the participants in order to gather the data. This fieldwork provided the opportunity for the researcher to become intimately acquainted with the participants and their contexts.

Upon arriving on site for the interviews, each participant was briefed about the nature of the interview. They were informed that it was an unstructured format, in which the purpose was to gain an understanding of their life worlds. The researcher encouraged each participant to speak of issues of value to them, including information about themselves, environments, activities and interactions of interest. They were informed that each interview would be audio taped and later transcribed into computer format and printed text. In addition to this data source, they were informed that written notes would be kept during and after each session in which observations and highlights of the interview would be documented. Each participant was assured complete confidentially regarding disclosure. When conducting the interviews, the researcher took precautions to be respectful, nonjudgmental and nthreatening, as to build a trusting relationship in which information could be disclosed.

Following the sessions with each participant, the researcher listened to each interview three times each in order to ensure that the recording had progressed smoothly and that data was audible and comprehensible. This process not only helped in the process of clarifying notes that
were taken during the recordings, but it aided the researcher in familiarizing herself with the data and provided information that facilitated subsequent interviews. As there were no transcribing facilities available, the audiotapes were transcribed at a later date.

As the data was collected in two phases, with the methodology differing in each phase, the following section will outline the research collecting methods used in Phase One and Phase Two respectively.

2.7. Phase One:

Phase one of this research study was conducted between May and June 1994. A total of 72 participants were involved. (42 girls and 30 boys). The participants were all from Sri Lanka and were of Singhalese or Tamil descent, ranging in age from three to thirteen. The participants were chosen from the four institutions in which the researcher carried out volunteer work.

Qualitative data in the form of journalling was conducted with all four groups as well as with 3 other refugee camps in which the researcher volunteered. The additional refugee camps were comprised of Tamil Sri Lankans who were displaced from their homes in the Eastern Province. For an overview of the total participants involved in Phase One, refer to Table 3.

**Table 3: Breakdown of Participants Involved in Phase One**

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of Girls</th>
<th>Total Number of Boys</th>
<th>Total Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A: Control</td>
<td>9</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Group C: Regular Orphans</td>
<td>15</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Group B: War Orphans</td>
<td>8</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Group D: Refugees</td>
<td>15</td>
<td>7</td>
<td>22</td>
</tr>
</tbody>
</table>

Total Number of Participants in Phase One = 72

Data from Phase One

72 participants were involved in Phase One in which the Goodenough- Harris Drawing test was administered. The participants from Group D however were dismissed prior to test completion as they were too distressed to ethically conduct the research. The 50 participants that completed the drawings test each produced two drawings, one of a woman and one of a man. The
drawing were scored using the Goodenough-Harris scoring scales.

In addition to the projective drawing tests that were completed by the participants, the researcher felt that it would strengthen the study to keep a personal journal, documenting observations of the various people and social experiences encountered.

2.8. Phase Two:

Phase two of this research study was conducted in August 1996. A total of 84 children were involved. (56 girls and 32 boys). The child participants were all from Sri Lanka and were of Singhalese or Tamil descent, ranging in age from three to thirteen and the adult participants ranged from mid thirties to sixty-two. The participants were chosen from three institutions in which the researcher had previously carried out volunteer work.

For an overview of the total participants involved in Phase Two, refer to Table 4.

Table 4: Breakdown of Participants Involved in Phase Two.

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of Girls</th>
<th>Total Number of Boys</th>
<th>Total Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A: Control</td>
<td>18</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>Group C: Regular Orphans</td>
<td>35</td>
<td>10</td>
<td>45</td>
</tr>
<tr>
<td>Group B: War Orphans</td>
<td>13</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td>Group D: Refugees</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Total Number of Participants in Phase Two = 108

Data from Phase Two:

Eighty four participants were involved in Phase Two of the study in which the Goodenough-Harris Drawing Test was completed. Two drawings were completed by each participant, one of a woman and one of a man. The drawings were scored using the Goodenough-Harris Drawing Test scoring scales.

Thirty nine participants were involved in Phase Two of this study in which the Ravens Coloured Progressive Matrices (CPM), Book Form was administered.

In addition to the projective drawings and the CPM, qualitative research was conducted in order to augment the study. Building inductively from the data gathered in Phase One, qualitative
aspects of research were expanded upon through participant interviews in which the narrative mode was applied. Four adults and two child participants were interviewed. As the interviews were essentially exploratory and the researcher was primarily interested in having the respondents define their worlds, a more open ended and less structured interview was applied.

Qualitative data in the form of journalling, personal interviews and researcher's observations were obtained from all four groups as well as with 3 other refugee camps in which the researcher volunteered.

2.9. Data Analysis and Interpretation:
2.9.1. Quantitative Data Analysis and Interpretation

Goodenough- Harris Drawing Tests

The projective drawing test used in Phase One and Two of this study were scored for the presence or absence of features, using a pass or fail criteria. As the child's cultural background may potentially influence the emphasis placed on body and clothing (Sattler, 1992), it was imperative that the data be scored not only by the researcher, but by a second scorer as well. In order to establish good interrater reliability, a 23 year old Sri Lankan lady was chosen as second scorer. Due to familiarity with the Sri Lankan culture, it was believed her function as second scorer would strengthen the data interpretation and highlight ambiguities that may be culturally related. Using a Pearson Product- Moment coefficient as a measure of interrater reliability, agreement between scorer one and two was high for both the drawings of the man and the woman (r=.98, p<.05 and r=.97, p<.05 respectively).

Ravens Coloured Progressive Matrices

The Ravens Coloured Progressive Matrices, Book Form was scored by the researcher. The need for a second scorer was eliminated, by the predetermination of correct test answers.

The results of both the projective drawing tests and CPM were analysed using the SPSS statistical program. The statistical tests applied in the analysis included two tailed Pearson Correlations, ANOVAs, multiple comparison Tamhane, paired sample and independent sample t-tests.

2.9.2 Qualitative Data Analysis And Interpretation

For the qualitative research that was conducted in this study, it was decided that a manual analysis and interpretation would be completed. Although there are various qualitative software packages available for computer's that allow for coding and analysis, one particular weakness of
these programs is that it does not let the researcher become intimately familiar with the data (Merrian, 1998). As the data pool was small enough to study without the use of a software package, a manual method was chosen. Through this method of organizing, coding, analyzing and interpreting the data manually, the researcher was able to become acquainted with the data, allowing for reflections that would not have been possible with the use of a computer software package.

**Journal**

The journal was transferred into computer format and printed text. It was read several times in order to become familiar with the observations of the physical setting, participant, activities and interactions that occurred. Two different forms of notes were then made. The first set of notes was made in the left hand margin of the printed text. The second set of notes was made on blank pieces of paper, in which emergent themes and categories were established. The journal was then read again, with these emergent themes and categories in mind. Each theme was allotted a colour and relevant text was highlighted with that colour. By highlighting the different themes, the data slowly became organized. The themes from throughout the journal were then collapsed and summarized under the various theme headings. This was then organized manually on a computer. These themes were read again several times and refined, with notes being made about the findings.

**Interviews**

Each interview was listened to several times in order to become familiar, not only with what each interviewee was saying, but also to capture the nuances and intonations of their voice. The interviews were then transcribed verbatim into printed text and computer format. Each interview was then read over several times. Notes, comments, questions and observations were written down, both in the margin of the interview transcript and on blank pieces of paper. The transcript was then reread with these marginal notes in mind. The paper with the comments was then attached to the interview and the next interview transcript was analysed in the same manner. This process helped in the overall construction of categories and emergent themes, as well as with capturing recurring patterns (Merrian, 1998).

After all of the interview transcripts were analysed separately, a comparative method was applied, in which comparisons of participant’s responses were made with each other (Merrian, 1998). The common themes and patterns were then allotted a colour and, when rereading comparatively relevant text was then highlighted with that colour. The themes from throughout the interview transcripts were collapsed and summarized under the various highlighted theme headings. This was
then organized manually by computer. These themes were read again several times and refined, with notes being made about the findings.

Once the analysis and interpretation for both the journal and interviews were completed, these two sources were examined comparatively detailing common themes and reoccurring patterns. As with the analysis of the journal and the interviews, this analysis was collapsed and summarized manually by computer.

In order to ensure validity of the themes and objectivity throughout the qualitative data interpretation, it is necessary to have a mentor or colleague review the field notes that were collected (Taylor & Bogdan, 1984) The journal and interview transcripts were therefore reviewed by a peer who was knowledgeable about both qualitative methodology and the Sri Lankan culture.
CHAPTER THREE

Results

The results of the present study were gathered from quantitative and qualitative sources. Within the quantitative source, data was gathered through the Goodenough-Harris Projective Tests and the Ravens progressive Matrices. Within the qualitative source, data was gathered through a journal and in-depth interviews. The results will be presented in two main sections. The first section will discuss the findings from the quantitative tests and the second will discuss the findings from the qualitative sources.

3.1. Quantitative Results

For the analysis of the quantitative data, the Goodenough-Harris projective drawing tests, gathered in 1994 and 1996 and the Raven’s Coloured Progressive Matrices (CPM), gathered in 1996 were analysed, studying the comparison group, regular orphans and the war orphans. Quantitative data could not be gathered from the refugee group as the participants were too distressed to ethically conduct research. Initially, each test was analysed separately to determine if there was a significant difference in performance between and within the groups of orphans of war, the regular orphans and the comparison group. Additionally, the drawings were analysed for significant differences between the genders that were drawn, as well as significant differences between Phase One and Phase Two of the study. The drawing tests and the CPM were then analysed to determine if a correlation existed between the two. For all tests analysed an alpha of .05 was used.

3.1.1. The Goodenough-Harris Drawings.

Several tests were conducted in order to understand between and within group differences for the three target populations. An initial 2 tailed Pearson Correlation revealed a strong significant correlation between the scores of the drawings of the woman and the drawings of the man ($r=.810$).

In order to determine whether differences existed among the various groups on the drawings, oneway ANOVAs were conducted. The results of this test revealed significant differences between groups with the drawings of the man ($F(2, 116)=7.1, p<.001$), and the drawings of the woman ($F(2, 115)=8.1, p<.001$).
To distinguish where the differences between the groups existed, (see Table D) Tamhane post hoc tests were completed for both the drawing of the man and drawings of the woman. The results of the Tamhane post hoc for the projective drawings of the man concluded that the difference between the comparison group and both the regular orphans and war orphans was significant ($p<.01$). There was no significant difference found between the regular orphans and the war orphans.

The Tamhane post hoc for the projective drawings of the woman, revealed a significant difference between the comparison group and the war orphans ($p<.01$), with the comparison group scoring higher than the war orphans. There was no significant difference between the regular orphan group and the comparison group and the regular orphans and the war orphans. See Table D- for means and standard deviations for the drawing tests for each group.

In order to understand the effects of gender between and within drawings, several tests were completed.
Table 6: Means for Boys and Girls on the Drawings of the Man and Woman

<table>
<thead>
<tr>
<th>Drawing</th>
<th>Gender</th>
<th>N</th>
<th>Mean (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>Girls</td>
<td>70</td>
<td>101.0 (25.0)</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>49</td>
<td>104.0 (25.1)</td>
</tr>
<tr>
<td>Woman</td>
<td>Girls</td>
<td>69</td>
<td>102.2 (23.0)</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>49</td>
<td>100.4 (23.6)</td>
</tr>
</tbody>
</table>

A group t-test was conducted to discern if there was an effect of gender on the drawings. The results of the group t-test revealed no significant difference in performance between girls and the boys for both drawings of the woman and the man.

A paired sample t-test revealed no significant difference between the drawings of the woman and the drawings of the men.

A repeated measures ANOVA with one repeated factor of the gender of test and one grouping factor of respondent gender was conducted in order to analyse within subject effects. The results revealed no significant difference for the girls drawings of the man and girls drawings of the woman, as well no significant difference for the boys drawings of men and boys drawings of women.

In order to understand if the groups varied by age, a oneway ANOVA on age by group was conducted examining the effects of age on the group performance. The ANOVA revealed that there was a significant difference found for age between groups (F (2, 119) = 13.3, p<.000).

Table 7: Means and Standard Deviations for Effects of Age in Months by Group

<table>
<thead>
<tr>
<th>Months</th>
<th>N</th>
<th>Mean (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison</td>
<td>38</td>
<td>61.8 (24.2)</td>
</tr>
<tr>
<td>Regular Orphans</td>
<td>39</td>
<td>96.0 (23.8)</td>
</tr>
<tr>
<td>War Orphans</td>
<td>45</td>
<td>72.6 (38.0)</td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
<td>76.7 (32.8)</td>
</tr>
</tbody>
</table>

A Tamhane post hoc was completed to examine where the differences occurred for age and group. The post hoc revealed a significant difference between the comparison group and the regular orphans group (p< .01). There was no significant difference between the comparison group and the war orphans. There was a significant difference between the war orphans and the regular orphans
(p<01). Table A-2 outlines the means and standard deviations for the effects of age on drawings.

In order to determine if the group differences found were due to differences in age, a univariate analysis of covariance (ANCOVA) analysing between subject effects was completed. The results revealed that when controlled for age, the effects of group are significant for both the drawings of the man (F(2, 117)= 7.6, p<.001) and the drawings of the woman (F(2, 116, )=8.8, p<.000). Thus the group differences were independent of age.

To determine if there were differences in the results of the data accrued in 1994 and the data gathered in 1996, a group sample t-test was performed, revealing no significant difference between the results of the tests collected during Phase One and Phase Two of this research study.

3.1.2. Ravens Coloured Progressive Matrices

To determine is there were differences between the groups performance on the CPM, a oneway ANOVA was conducted, revealing no significant difference between the comparison group and the regular orphans.

Table 8: Means and Standard Deviations for the CPM for Each Group.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison Group</td>
<td>11</td>
<td>26.8 (34.0)</td>
</tr>
<tr>
<td>Regular Orphans</td>
<td>16</td>
<td>23.0 (17.9)</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>24.6 (25.2)</td>
</tr>
</tbody>
</table>

A t-test was conducted to discern if there was an effect of gender on the CPM test. The results revealed no significant difference between boys and girls in their performance on the CPM.

A Two Tailed Spearman Correlation using percentile rank was conducted to examine the effects of age on performance, revealing no significant correlation

A two tailed Pearson Correlation revealed no significant correlation between the Ravens and the Goodenough Harris Projective Drawings of the men and the women (p= -.09. and p=.17 respectively).

3.2. Qualitative Results:

Qualitative data was gathered from two sources. The first source, collected in 1994, was participant observation in the form of a journal. The second source, collected in 1996, was observations and in-depth interviews with participants. As the research was primarily exploratory
in the Phase One of the study, the journal allowed for an opportunity to learn and formulate hypothesis about the participants and their milieus, while the interviews conducted during Phase Two of the study allowed for a more in-depth, fine tuned perspective of these social phenomenon. As the data from Phase Two of the study builds inductively upon the results from Phase One of the study, the emergent themes from each source will be examined separately.

3.2.1. Journal

Within the journal, 7 different groups were delineated and examined. Supplementing the quantitative data gathered from the two orphanages and the Montessori comparison group, additional information from four refugee camps was gathered. The analysis of the journal entries of each groups revealed several categories including: physical structure, play area structure, surrounding area, stability, hygiene, dispositions, staffing/caregiving and community support. A profile of each group examining these categories will be outlined briefly, followed by a discussion of the emergent patterns.

3.2.1.1. Comparison Group

The comparison group was composed of Singhalese Sri Lankan children from a Montessori school. This school was located in a residential area in central Colombo. The school ground was small, well maintained and enclosed by a fence. It included a play area with equipment and an area in which to run. The building consisted of two areas, a study area and an activity area. The study room was built in an open manner, with two walls extending to the roof and two walls ending three feet from the floor. These two walls were supported by beams and had no windows. Due to the structure being so open birds would often fly in and out and perch. This room was furnished with tables and chairs. The other room was for activities, with cupboards full of games. The walls of the room went to the ceiling on two sides and were completely open on the other two. The walls were posted with the children’s work. The appearance of the school was warm, safe and cheerful.

The children were clean, well dressed and healthy looking. In the school, the children were given routines and rules which they had to adhere. As the teacher was very involved with each child’s family, she ensured continuity of these routines and rules within the children’s home lives. It was observed that the children’s parents reciprocated this concern and were very involved in their children’s lives and schooling.

The children who attended this school were primarily Buddhist and Buddhist meditation and practices were followed daily, both at home and at school.
These children were exposed to acute trauma from effects of the internal conflict.

3.2.1.2. **Regular Orphans**

This orphanage had been in operation for many years. It was set within a residential area in central Colombo. It consisted of a large building divided into several areas. It was spacious, well equipped and well maintained. The windows were large. The orphanage was surrounded by a fence. The entrance to the building was a hall, used for administration and guests. The walls were adorned with pictures, crafts and awards won by the children. There were three other areas; the first area being open for activities, the other equipped for studying and the third for living quarters. All were clean and well maintained.

The children were well clothed and healthy looking. They were active, talkative, interactive and eager to participate in activities. The staff consisted of one main caretaker, with several helpers. In conjunction with the resident staff, this particular orphanage had many volunteers from the community who came for social support.

The children’s schooling was done outside of the orphanage. Teachers would come to the orphanage after school once a week to tutor the children.

As this was a Buddhist run organization, Buddhist principles and practices were adhered to every day and the children were visited by a monk once a week to be taught about Buddhistic principles. In conjunction with the routines of their religious practices, there were many rules and routines within the orphanage to which the children also had to adhere.

These children were exposed to acute trauma from the effects of the internal conflict.

3.2.1.3. **War Orphanage**

The children in this orphanage were Singhalese orphans of war. They were brought from the jungle areas of Northern Sri Lanka, where they were found abandoned as a result of the internal conflict. This orphanage was a Buddhist run organization, sustained through community support. It offered the children a stable life, with routines, responsibilities and a sense of family. It had volunteers and social support systems that functioned to ensure the children’s well being, emotionally, medically, financially. The children were kept at the orphanage until they were adults and were educated so that they could go on to further studies or employment.

The orphanage was situated in a residential neighbourhood on the outskirts of the city. It consisted of two areas, with the main area housing children 6 and older and the smaller area housing children 5 and under. The main area is quite large and well kept. It has a school area and living
quarters for the children and head monk. The housing area for the children consisted of one storey cement structures, with large windows and rows of bunk beds. There was a separate area for showering, consisting of large stalls, set outdoors with several showerheads. The housing for the children six and older is well organized and maintained. The head monk’s housing is set beside the older children’s residence and consists of a one storey building. The front area of the building is reserved for administrative purposes, with desks, books and chairs and is decorated with religious pictures and statues. Around the entrance to the main orphanage were statues of Buddha. The grounds were clean and well maintained.

The housing for the children 5 and under consisted of a one storey cement building, with large windows. There was a room for the babies, a play area that also served as a work and sleeping area, a storage room and a kitchen. There were latrines and a well for washing and cooking. The orphanage was well lit, ventilated and maintained. Between 1994-96 this area was upgraded to include toilets, showers, running water, two kitchens, a two storey building, with outfitted beds, a play room, guest area, and rooms for the caregivers. The main building was left for the children to use as an activity area.

The younger children’s play area was the room in which they slept, ate and worked. It was supplied with toys. The yard was large with various toys and an area for running and playing.

The children from both sections of the orphanage were well fed, bathed and dressed. The caregivers themselves were clean and healthy. The main caregiver was a young woman who washed the children twice daily, prepared all the meals, washed the clothes, taught the children activities, took care of them when they were sick, and maintained the orphanage. The main caregiver was aided by another adult caregiver and four older orphans sent from the main orphanage.

The children were active and played readily by themselves and each other. They listened, cooperated, and attended well to tasks. Very little aggressive behaviour was observed. In fact, the children interacted remarkably well. They often sang songs of the necessity to get along as a family. It was evident that these children interacted as a family, showing each other nurturance and compassion. They were remarkably gentle and kind with each other, without the need for prompting. This was reflected in activities where the older orphans were observed to help the younger children with a mature sense of patience and kindness.

The children were schooled at the main orphanage as there were classrooms on the complex. Volunteers from the community would come to tutor the children, also providing material and
funding for education. Monks would come to also offer religious teaching. As this was a Buddhist organization, the children practised Buddhism daily.

These children were exposed to chronic danger as a result of the internal conflict.

3.2.1.4. Refugee Camps

Within group D, four refugee camps were observed. They shall be referred to as refugee camps 1,2,3,4. The members of each camp were Tamil Sri Lankans from the Eastern Province who had been displaced due to the internal conflict. Although each camp had been open for about three years, the refugees sense of security was reported by outreach workers to be minimal as their living arrangements were always tenuous. Social support/ community support was minimal for the camps, with all camps being visited once every week to two weeks by social service outreach programs.

In the camps, the children had a variety of caregiving situations. Some had both parents alive and with them, some had both alive with only the mother present, while others had lost both caregivers in the displacement.

In all situations the children had the opportunity to attend school but often did not. They were not forced to attend school by their parents, possibly because their situation was transitional, and/or their parents were dealing with stress and trauma and schooling was not a priority.

All of the children at the refugee camps were exposed to chronic danger as result of the displacement due to the war.

3.2.1.5. Refugee Camp #1

Refugee camp #1 originally housed 150 families. With the closing of nearby camp, the two camps were merged within this camp, resulting in its overcrowded state. There were a great deal of internal and external problems. Internally the camp was small and overcrowded, with the refugees grouped by caste. It was reported that due to caste differences, people from the higher castes felt they should not have to reside with the lower caste, but should be served by them instead. With time, the duties were divided and tension from class differences decreased. Externally, there was pressure by area residents to have the camp closed. During the researcher's work period, closure of this camp in fact occurred and the refugees were forced to move back to the Eastern Province.

This camp was situated in one of the nicest residential areas of Colombo. Despite this location, it was quite destitute. The camp consisted of a one story hall structure made of cement walls with small windows. It was poorly lit, built and kept. The living quarters served for eating, sleeping, cooking and living. This living space was determined by the alignment of boxes and other
objects and was about 5 feet by 3 feet in size.

The children were schooled and played in was a makeshift school within the camp. The roof was made of woven coconut leaves, the walls were made of woven bags, old doors and wooden slabs, leaning against wooden beams, the floor was made of woven mats.

Activity periods were spent trying to soothe the children and break up their fights. The children were hard to contain and control. They were very distracted, irritable and unusually violent. The older children interacted better than the younger children who were more irritable and distressed. The parents were observed often to be engaged in their own distress or activities. Overall this camp was overcrowded, disorganized and unhygienic. It was extremely hot within the camp and the children were dirty from sweat and crawling on the floors. They did not appear healthy.

3.2.1.6. Refugee Camp #2

Refugee camp #2 was internally stable, being better organized and maintained than camps 1 and 3. This camp was located in a busy area of the city. It was built by a main road and was therefore exposed to a great deal of traffic, with little vegetation or housing in the near vicinity. The camp consisted of a two-story cement building, with open windows, surrounded by walls. The only play area was outdoors. It consisted of dirt, sand, and stone floor. Despite a limitation of resources, equipment was made in an ingenious manner so that the children had something to play on. For example, swings were made from plastic ropes, similar to ones used to bundle newspaper, the seats were made with cardboard with holes punched in the sides and metal poles were used to hand the seats on. These poles also doubled as goal posts. Overall, the playground was well kept.

Within this camp, the children appeared a bit dirty but showed no remarkable hygiene problems. They were well behaved, listening and co-operating well. The older children seemed happy and were observed to be helpful with the younger children, often picking up the crying babies to soothe them. Two cases were observed of aggressive children, with frequent pushing, yelling, biting and strangling. It was believed that these children were born in the camp. It was believed however, that the majority of children in this camp had stable lives before being displaced.

The caregivers at this camp did not come to see what the children were doing when the children were engaging in activities, but instead carried on with their own activities.

3.2.1.7. Refugee Camp #3

Refugee camp #3 was unorganized, with no established rules. It was not well maintained and organized. It consisted of a community complex, with dilapidated shed-like buildings, apartments
and halls used for housing. The researcher was involved with children from one main building. This building was small, made of cement with tiny window openings, letting in little light and air. It was poorly kept. The separate dwelling areas within the building were made from rags hung by ropes and were small (5 x 3 feet). The ground within these personal spaces was used for sleeping, eating and cooking.

There was no play activity area at this camp so activities were conducted in a nearby field. Play activities were conducted only when FRC therapists were available, as no activity leader was chosen in the camp.

The camp complex was surrounded by crowded streets where merchants were vending vegetables, fruits, and fish. Everything was set in baskets on the ground, attracting flies and insects. The ground around the complex was scattered with garbage. There were stalls with chicken coops and goats and ducks walking around. There was a ditch with polluted, running water in which the children were playing and drinking.

The camp and surrounding area were unhygienic and more poorly kept than the other camps. The building was infested with flies. Despite the unhygienic living conditions, the children did not have any remarkable hygiene problems.

The children were eager to participate in activities. They displayed a wide range of behaviours, with some playing quietly by themselves, while others interacted well with others. The children showed various abilities to attend to instructions and requests, with the older children demonstrating an ability to follow requests better than the younger children.

Inside the camp the women that were observed seemed to be involved in cooking and caring mainly for the small babies. The only men seemed to be outside milling with the vendors.

3.2.1.8. Refugee Camp #4

Camp #4 was the most organized of all the camps. There were many rules at the camp which were established and adhered to dealing with divisions of responsibilities. There were fewer families living in this camp than in the others.

This camp was set back within a nice residential in the Colombo region. It consisted of a two storey building with large open windows, surrounded by a fence. It was clean and well maintained. There was no play area within the camp so the children were taken to a nearby field for activities. The field was large and clean and despite not having play equipment the children were kept active through running, stretching and ball games.
The children were healthy looking, with no remarkable hygiene concerns. They interacted and co-operated well with each other and were eager to share their activity experiences with their parents. They demonstrated the ability to attend to the tasks given by the activity leader. They were better able to attend and complete tasks than the children from the other camps. The children seemed happier, more communicative and better adjusted than in other camps. The children were older than the at camps 1, 2, and 3 and would have had a normal lifestyle before being displaced.

Tables 9 and 10 highlight the status of each group in the various categories discussed in the brief profiles.

**Table 9: Status Outline of Participants**

<table>
<thead>
<tr>
<th>Group</th>
<th>living area (well maintained)</th>
<th>play area (well maintained)</th>
<th>surrounding area (well maintained)</th>
<th>internal rules established</th>
<th>stability &amp; security of organization</th>
<th>community support</th>
</tr>
</thead>
<tbody>
<tr>
<td>comparison</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>excellent</td>
<td>yes</td>
</tr>
<tr>
<td>regular orphans</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>good</td>
<td>yes</td>
</tr>
<tr>
<td>orphans of war</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>good</td>
<td>yes</td>
</tr>
<tr>
<td>refugee camp #1</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>poor</td>
<td>no</td>
</tr>
<tr>
<td>refugee camp #2</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>fair</td>
<td>no</td>
</tr>
<tr>
<td>refugee camp #3</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>poor</td>
<td>no</td>
</tr>
<tr>
<td>refugee camp #4</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>fair</td>
<td>no</td>
</tr>
</tbody>
</table>
Table 10: Status Outline of Participants

<table>
<thead>
<tr>
<th>Group</th>
<th>Trauma Endured</th>
<th>Hygiene</th>
<th>Dispositions</th>
<th>Caregiving Status</th>
<th>Attended School</th>
<th>Religious Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>comparison</td>
<td>acute</td>
<td>excellent</td>
<td>excellent</td>
<td>excellent</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>regular orphans</td>
<td>acute</td>
<td>excellent</td>
<td>good</td>
<td>excellent</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>orphans of war</td>
<td>chronic</td>
<td>excellent</td>
<td>good</td>
<td>good</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>refugee camp #1</td>
<td>chronic</td>
<td>poor</td>
<td>distractable/</td>
<td>poor</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>refugee camp #2</td>
<td>chronic</td>
<td>good</td>
<td>good</td>
<td>fair</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>refugee camp #3</td>
<td>chronic</td>
<td>poor</td>
<td>distractable/</td>
<td>poor</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>refugee camp #4</td>
<td>chronic</td>
<td>good</td>
<td>good</td>
<td>fair</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

A qualitative analysis of the profiles of the groups revealed several emergent patterns. These patterns are best represented along a continuum, with the children who were the most stable and adjusted residing in the most ecologically stable environments, with exposure to the least amount of traumatic effects of war. Conversely the children who were the least stable and well adjusted resided in the least ecologically stable environments, with exposure to more severe forms of trauma. These themes will be examined in more detail, beginning with the group of children that were the most adjusted and ending with the group that were the least well adjusted.

The children from the comparison group appeared to be the most well adjusted. They were able to attend well to the tasks at hand, and communicated and interacted well together. These children appeared to be healthy, well dressed and clean. From observations, it was noted that these children were offered a great deal of stability and security, in both the home and the school environment. In both environments these children had active and supportive caregiving. Their learning, surrounding and home environments were all well maintained, promoting an environment
for learning and growth. Although these children were exposed to acute danger as a result of the war, the teacher reported that they were encouraged to talk about their fears and concerns in daily talk sessions at the school as well as at home. In both home and school environments, the practice of Buddhist principals was reported to be very important. Meditation and adherence to the Buddhistic practices were therefore incorporated into their daily routines in both environments.

The regular orphan children appeared to be the well adjusted, but were noted as attending slightly less well than the children from the comparison group. The regular orphans were eager to participate in activities, communicate and interact but were also noted to be slightly distractable, vying for the attention of the caregivers. Overall, these children were healthy, clean and well dressed. Their learning, home and surrounding environments were well maintained and the quality of caregiving they received was excellent. At this orphanage, there were several caregivers that provided caregiving for the children. The caregivers were reported to receive social support three times a week in order to run the orphanage as well as to remain healthy themselves. In conjunction with these caregivers, the orphanage was given a great deal of community support, through volunteers as well as financial and social support. This community support sustained the orphanage and provided stability for the children. It should be noted that the volunteers and the caregivers were observed to be very interactive with the children, at times showing physical affection. These children were exposed to acute trauma from the internal conflict. As this orphanage was a Buddhist organization, meditation and adherence to Buddhistic practices was incorporated into the children's daily routines.

The orphans of war appeared to be happy and well adjusted like to the other groups. These children however were noted to seek attention slightly more frequently from caregivers than the regular orphans. In general, these children were healthy, clean and well dressed. Their learning, home and surrounding environments were all well maintained. Unlike the other groups, this orphanage was located on the outskirts of the city and was less accessible to the community. For this reason, it was reported to lack the amount of community support it may have received had it been centrally located. Although the quality of caregiving these children received was good, there were fewer caregivers here than at the regular orphanage and the main caregiver was reported to have been struggling with the demands of caregiving. Although volunteers were reported to offer social support to this orphanage, it was far less than the regular orphans received due to the orphanages non-central
location. This orphanage was visited only once every two weeks by social support teams. During these visits, attention was primarily focussed on the children’s needs and not proactively on the caregivers. It was reported that within this orphanage, the caregivers had a general rule about not displaying physical affection towards the children as they were afraid that the children would become too needy for physical interactions. These children were all exposed to chronic trauma due to the effects of the internal conflict. As this orphanage was a Buddhist organization, meditation and adherence to the Buddhistic practices was incorporated into the children’s daily routines.

The children from refugee camp #2 and #4 were very similar in terms of their dispositions and adjustment. In relation to the orphanages and the comparison group, these children were more distractable, displayed more aggressive behaviour and interacted more poorly. In comparison to the children in refugee camps #1 and #3 they were better adjusted in these areas. These children appeared to have no remarkable hygiene concerns. Their home, surrounding and play areas were all well maintained. Within both refugee camps, rules were established and adhered to by the residents contributing to its maintenance and organization. The caregiving was stable, but the caregivers in both camps did not seem particularly involved with the children. This camp had social support services that visited once every week- two weeks. No other community support was reported. It was reported that these children did not attend school either because of their tenuous living state or because the caregivers were dealing with distress and schooling was not a priority. These children were exposed to chronic trauma from the war due to their displacement.

The children in camp #3 appeared to be less poorly adjusted than the children in camp 1, but worse than the children in all other groups. They demonstrated a wide variety of behaviours with the older children interacting better than the younger and the younger children displaying more violent behaviours. The housing, and surrounding areas were very poorly maintained and unhygienic. Despite this, the children showed no remarkable hygiene problems. The caregiving was poor, with the women tending only to the small babies and men being absent and unavailable. This camp had social support services that visited once every week- two weeks. No other community support was reported. As with the other camps, these children did not attend school. These children were exposed to chronic trauma from the war due to their displacement.

The children at refugee camp #1 were observed to be the most poorly adjusted in comparison to all of the groups. These children were very distractable and could not be contained or controlled
during activities. Although the older children were observed to help the younger, distressed children, the majority of children were violent, distressed, and unwilling to interact with other children. The children, their homes, and learning area were not hygienic or well kept. Their living environment was overcrowded and destitute. Although the surrounding area was quite nice, area residents wanted the camp closed, thus creating instability for the residence of this camp. The caregiving for these children received was poor as the caregivers were observed to be involved with their own distress. This camp had minimal community support, receiving social services only every week to two weeks. As with the other camps, these children did not attend school. These children were exposed to chronic trauma from the war due to their displacement.

From the results of a qualitative analysis of the participant observations of the various groups, it was found that the children that had the greatest stability, in terms of housing, schooling, play routines as well as consistent good quality caregiving, community support, and daily routines and rules appeared to be the happiest and well adjusted. As well, these children were the ones who had been exposed to the least amount of war trauma.

Despite the loss of parents, the orphans who had been exposed to chronic war trauma, seemed better adjusted than the children who had parents but whose ecological environments were less stable and secure. This was highlighted with the war orphans and the refugees, where the refugees' living environments were not well maintained, stable nor supported by community support services. The children often had fewer or no rules and routines to adhere to and the levels of caregiving were often poorer than in the other organizations as the parents of the refugee children were often dealing with their own distress from the effects of war trauma.

The qualitative analysis revealed that the children within the refugee camps also existed along a continuum, with the children who had a more stable ecological environment being better adjusted. The children that were observed to be the most adjusted, displaying the least amount of aggressive behaviour came from camps which had definable rules, were better maintained and had fewer families living within the housing areas. These children also had more caregiver support and tended to have no remarkable hygiene problems, unlike their refugee counterparts who were less adjusted. The refugee children that displayed aggressive, violent, distractable behaviour tended to come from the camps that were not well run, did not have rules, were unhygienic and had little caregiver support.
Within all refugee camps it was noted the older children appeared to share, play quietly and often engaged in nurturing the younger, distressed children. It was reported that these children had spent the majority of their lives with two parents before becoming displaced. The younger children who were uprooted during the war tended to either 1) cry more and search for caregivers but were ambivalent when a caregiver arrived. 2) engage in violent behaviour, using toys as guns and swords, often biting and strangling other children. The children born at the camp appeared to be happy, curious but would not communicate or listen to others. They always played independently and would become possessive and aggressive if others tried to play with them.

Overall, the analysis of the journal revealed a pattern of the most adjusted children residing in the most ecologically stable environments, with these environments being well maintained, organized and provided for, with good quality caregiving, routines and community support.

3.2.2. Interviews

A qualitative analysis of the interviews revealed several emergent themes. These themes included spirituality, relationships, coping, security and stability.

3.2.2.1. Spirituality

The predominant theme that emerged with all informants dealt with spirituality. All informants, with the exception of Maya discussed their beliefs regarding Buddhism. Maya spoke more generally about a sense of spirituality, rather than a concrete organized philosophy.

Within this theme, several sub-themes were distinguished. These sub-themes included, spirituality in the school environment, home environment, as a form of discipline, as a practice and as a coping mechanism.

Within all groups studied, with the exception of the refugee camps, the practice of Buddhism within the schools was reported to be pivotal. Within the schools, daily lessons were conducted about the Buddha, in conjunction with daily meditations, prayer practices and adherence to Buddhist precepts. The children not only studied this spiritual practice formally, but were encouraged to practice it in their lives. For example, Manika spoke about donating her school supplies to needy children. She stated that she felt that this act of kindness was “good for those in Buddhist school” as they would be practising what they had learnt.

In addition to the teaching and practising of Buddhism within the schools, all of the school environments were furnished with statues and pictures of the Buddha. Any form of disrespect shown
to these statues was met with severe reprimand. For example Malindha reported that the children at his school had all been caned because of a disrespectful act done to one of the statues. As no one admitted to the act, all of the children were punished to show that “it was very disrespectful to do that.”

In conjunction with the practice of Buddhism within the schools, the informants all discussed the importance of conducting these practices at home. Each adult informant reported that it was “important to provide an environment where prayer and meditation was important and to have good religious ways in order to guide the children.” They also believed it is important to start the children young with these practices.

Within the home environment, Preethi, Maya, Malindha, and Manika report meditating twice daily. Manika and Malindha report meditating with their family, including each other, their mother and their grandparents. They both report meditating, not because they are forced to do so but because they want to in order to strive “for a good life, a simple life”.

Srikanthi reports that she communicated with the parents of her students and ensures that their spiritual practices are also carried over to the home environment, also stating that it is in order to encourage “a good life, a simple life”.

Within the orphanages, the children are reported to practice Buddhism every day within their home environment. Monks visit the orphanages weekly in order to offer religious guidance within this home environment.

Spirituality was discussed by Srikanthi, Preethi and Maya as a means of discipline. They stated that through spiritual practice, children learn to live a good life as it offered the children a sense of guidance. According to Maya, her children and grandchildren were always provided with an environment where prayer and meditation was regarded as important. She felt that “it is important to teach children from an early age in the homes how to lead a good life, a simple life where material things are not important, where you should help each other and not harm people”.

The last sub theme that emerged was spirituality as a coping mechanism. According to Maya, Preethi, Malindha and Manika, meditation should be done in order to protect oneself and others. For example, Manika was told by her mother to meditate for her friend who had suffered tremendous loss due to the war. She was told to meditate in order to protect her friend through her rough period. Manika and Malindha were also told to meditate to deal with the worry of harm coming to the
family. This notion was summarized by Maya, when she stated “you must pray to be safe and to save yourselves ...you always ask to be protected and I always say that we can only depend on the divine help more than any other help. We have to pray. I always pray for courage to face life. I don’t think I could have managed without that. I am always very conscious of prayer. I’m conscious of that help...conscious of that prayer. The prayer goes on you know? Help me, Save me.”

3.2.2.2. Relationships

The second most predominant theme deals with relationships. Within this theme, four subthemes are distinguished. These themes are caregiver-child relationships, family relationships, school relationships and community relationships.

Within caregiver-child relationships, all of the adult informants stated that it was important to cultivate healthy relationships with children, creating situations in which the child felt safe and secure and had a forum in which to learn. According to Preethi, “parents must teach children and explain right and wrong until the child has their own judgement” She felt that “problem children had roots in the parents”, in the sense that it was the parent’s responsibility to guide the children and teach them how to lead a good life. According to Preethi, Maya and Srikanthi, this teaching involved giving them religious guidance, fostering of development of co-dependant relationships and keeping open lines of communication. Preethi and Srikanthi both stated that “it is important for children to be obedient”, listening and respecting their caregivers. In order to cultivate these relationships, Srikanthi and Preethi stated that they used positive reinforcement techniques. Preethi also stated that, if it was necessary, she used punitive punishment as a form of discipline.

Within the subcategory of family relationships, the participants discussed the importance of cultivating strong family ties. Within this category it was noted that the informants never spoke specifically about immediate families, but instead, always discussed relationships with extended families. This extended family was defined by Maya and Preethi as including “brothers, sisters, parents, grandparents, cousins, uncles, aunts, in-laws and at times domestic helpers”.

The relationships within the extended family were reported by Preethi and Maya as being very crucial. According to both women, “in Sri Lanka there is a co-dependence, where people are always willing to help each other, get along and survive, unlike in the Western world, where people isolate themselves with everything they do.” Through this co-dependence, they believed they could survive and meet life’s demands.
The notion of co-dependent relationships was exemplified when Preethi and Maya spoke of raising children. Preethi stated that “in the Western world people are less willing to forgo freedom and be selfless.” She felt that “it was a sin to be born in the Western world, where families are often one parent, maybe moving in with other people”. Overall, Preethi reported that she felt it was easier in Sri Lanka to raise children because the extended family was always available to help and be selfless in this process.

Preethi’s beliefs in having extended family involvement during the raising of children were re-iterated during Maya’s discussion of co-dependence, in which she described the raising of two generations of her family: her child as well as her grandchildren. During the period when Maya was raising Preethi, she stated that she had the help of her husband, cousins, aunts, uncles, in-laws and at times, their domestic helpers. Later when Preethi and her husband lived abroad, their children were left in Sri Lanka to be raised for the first few years by Maya, her husband, extended family members, on both sides and sometimes the domestic of her extended family. During both periods, Maya stated that her “family was very supportive, coming without being asked to help and never asking for anything in return.” Now Maya returns the favour whenever possible. Although Preethi has returned to Sri Lanka to care for the children, they are still very much embedded in the extended family, continuing the reciprocity of these relationships. For example Preethi and the children visited and maintained Maya’s house daily, allowing Maya to continue her community work.

Overall, Maya believed in co-dependance to survives, stating “we are always dependant, although we may think we are independent. We are dependant on a whole lot of people in order to exist.” She felt that it is important to start teaching this idea to children at home when they are young in order that they may help each other to live. She concluded by stating “extended families exist in Sri Lanka because it help one survive.”

Within the school environment, Srikanthi discussed how she felt it was critical to foster a trusting, secure relationship with the children. In order to encourage these relationships she used positive reinforcement to teach and discipline, tried to understand each child’s temperament in order to capitalize on their full potential and conducted discussion sessions, and daily talk sessions in which she and the children could talk issues in their environment and within themselves.

In conjunction with fostering relationships with her students, Srikanthi felt it was also pertinent to foster open, communicative relationships with the children’s parents, discussing such
issues as changes and problems in family structure, extra curricular activities etc. By having an open dialogue with the parents, Srikanthi felt the children would have continuity in their environments in terms of stability and safety.

Within the orphanage relationships were cultivated between the children and the teachers and volunteers who visited regularly in order to teach skills, tutor and help with school work. Lilani herself visited the orphanage 3 to 4 times a week to help with school work and dancing and singing skills and reported that monks also visited at least once a week to guide the children in their religious practice.

The sub theme of community relationships also emerged with all participants. The adult informants believed that raising children in a community atmosphere was very important, with relationships within the community including parents, extended family, teachers, siblings, and religious affiliations. According to Maya ans Preethi, “one must rely on these relationships to survive on a daily basis.”

Community relationships were highlighted in different ways throughout the interviews. For example for the child informants, community relationships were created in both the home and the school environment, when they were encouraged to donate belongings to children affected by war in other communities. For their, grandmother, community relationships were fostered through voluntary work at the FRC. For Preethi, community relationships were established through her work at her children’s school in which she helped with bomb check duty as well general school work. According to Lilani, the children of the orphanage receive support by the community, through donations and social support by volunteers, such as Lilani herself.

3.2.2.3. Coping

The next most predominant theme dealt with coping, which was delineated into spiritual coping and practical coping.

With all informants, the use of their spiritual practice as a means of coping with both daily events as well as effects of the war was identified as being critical. All informants reported meditating daily. For the children meditation occurred in both home and school environments and for the adults this occurred twice daily at home. The children were told by the adults to meditate in order “to help protect themselves, family, friends and people in general from the atrocities of war as well as to have a good life.” According to Maya, one must pray to be safe. She stated “you always
ask to be protected and I always say that we can only depend on the divine help more than any other help. With the adults at the torture and trauma centre, Maya teaches them rely on the divine for help. She stated “we have to pray. I always pray for courage to face life. I don’t think I could have managed without that.”

In conjunction with spiritual coping, the theme of coping in a practical manner emerged. With all informants, doing various activities within their own capacity in order to cope with daily life and the effects of the internal conflict. As the children were raised in a community atmosphere, the sense of co-dependence contributed to their coping mechanisms. where informants felt that “people were always willing to help each other in order to get along and survive” For Manika and Malindha, daily coping involved knowing that this lifestyle would provide for them in times of need, for example, borrowing water from neighbours during a power cut, or donating personal belongings to poor villagers.

For Preethi, coping on a daily basis involved “taking care of her mother’s house, attending to preparing meals, shopping, cleaning, making sure that (her) father is attended to in order that (her) mother is able to go and work at the FRC.” In order to cope with the effects of the war, Preethi conducted bomb checks at her children’s school.

Coping for Maya was accomplished through her reliance on friends and family and the idea of reciprocity in order to have daily needs met, for example completion of chores around the home. In terms of coping with the effects of war, Maya participated in community work with torture and trauma victims, travelling not only within the community but on outreach programs throughout the island area.

Srikanthi’s means of coping involved fostering a trusting secure relationships with the children. In order to cope with the effects of war, Srikanthi made a point of discussing fears with children, “conducting daily and weekly talk sessions in which the children are allowed to discuss issues of concern, things around that they are dealing with, issues they hear on the news that they may not understand.” Srikanthi did not allow war play at school and discussed why it was not the way to interact with people. In addition to these means of coping, Srikanthi communicated with the children’s parent’s in order to understand the child and any differences in behaviour, noting such things as changes in family structure.

Lilani coped through volunteering at the orphanage helping with school and various skills.
3.2.2.4. **Security**

The fourth theme that emerged dealt with security. This theme emerged along a continuum, with the informants discussing factors that made them feel secure, as well as facts that made them feel insecure. Within the security theme, living arrangements, practical and spiritual security were discussed.

For Maya, Preethi, Malindha and Manika, the manner in which their houses were built, along with their location promoted a sense of security. Preethi and the children's house was attached to Maya’s house. This building was also attached to the building in which the grandfather worked. The entire building was fenced in to provide security from the street. The house was surrounded by relatives, with aunts, uncles and cousins living across and down the street. These relatives visited daily, bringing food and seeing how everyone was keeping. During the evenings, each family cooked a dish of food and would distribute it to the neighbours. By the end of the food distribution, everyone had a complete meal that was composed of the different dishes prepared by the extended family.

Both the orphanage and the comparison group’s school lent a sense of physical security for the children, being well fenced, with plenty of privacy and security. Both were centrally located within residential communities.

A sense of security was established with all of the informants in a practical sense by the types of relationships that were established, along with the knowledge that because of these relationships, their needs would be met. For example, according to Maya, “knowing that people would come forward to help with raising the children, doing the housework as well as knowing that the children were never left alone with a baby-sitter or domestic help but always had aunts, uncles, grandparents, parent near by to help ensured the children felt secure” This knowledge also allowed Maya to feel secure when she left the children to attend to work.

For the orphanage, it was stated that the means of attaining this practical security was through the amount of community support received. According to Lilani, the regular orphanage was well funded, providing for more than the children’s basic necessities, such as food and medications. They also received a great deal of social support, in which they were taught various practical skills.

Security was established through the belief systems in which a blend of spirituality and practicality appeared to merge, where the all of the informants had the core belief system of co-dependency, communication, and sense of belonging and responsibility within a community.
3.2.2.5. Insecurity

In opposition to security, the informants voiced insecurities, which mainly related to the political problems of the country. The adult informants displayed a general sense of insecurity when discussing the state of the world, thinking that it is “going down, down”. In addition to this there was the concern that there were “more unbalanced people in the world, that violence was escalating and that children are not taken care of as well as they were in the past.”

For the children, Manika voiced feeling frightened about possibly dying because of the warring and the bombing that had recently occurred next to her school. She stated that “all the students must carry all of their school supplies and lunch in polythene bags so that the teachers, parents and older children can check for bombs every day.” She worried that harm would come to her family due to the war, as it has with her friend, who lost her father and was left with very little, i.e. lost her house and was now “very poor” She also worried that “the soldiers that are on the roads might kill.” She talked about the bomb checks occurring with “everything”; the cars, motorcycles, within the schools, stating that the her country has now become “very bad”

3.2.2.6. Lifestyle

Another theme that emerged from the interviews was that of trying to live a good lifestyle. According to all of the participants, a good lifestyle should be strived for and involved knowing that hard work is important, material things are not and, to lead a simple life, one helps the other survive through always being willing to help. According to the adult informants this teaching comes from being embedded in and raised by a community, which includes family, school, religion and social structure

3.2.2.7. Instability/ Stability

In the last theme that emerged, issues of stability were discussed. Similar to security, the means for establishing stability was stated by the informants as occurring through co-dependance and creating a sense of community, religion, family school and social structure and by leading a good, simple life.

Instability was mainly discussed in terms of social structure. Maya, Manika, Srikanthi all spoke about the effects the war was having on people. Manika stated that “this country is no good because the army, navy, police, air force all get together and are doing it” (creating war). She felt that “the LTT are making us bad and they are killing poor villagers” She is frightened that there will be
a bomb put to the bank near her school and then the students will all die.

According to Maya "the people who have been tortured have gone through a great deal, mentally, physically, financially. Violence is escalating, people are increasing in number, maybe when you think of history there have been wars all the time, the neighbouring countries and wanting to conquer, so man has been behaving badly but I think that the methods that they are using now are even worse. They are using modern technology." She felt that "the people creating these problems have gone beyond the normal way of being divine. Their minds are not balanced... They have really gone beyond the normal way of being divine by allowing those evil way, thoughts/ ways...people who have been living happily with all different nationalities are suddenly fighting with each other." she compares this to the present situations, fearing now that "the world is going down, down."

Srikanthi fears that children are not being taken care of now as well as they were in the past, She feels that because of all the stress living with war creates, the need for communication both at home and at school has become very important.

In general, the results of the qualitative analysis with the various participants revealed several emergent patterns. It can be concluded that, within each environment studied, with the exception of the refugee camps, a lifestyle in which spirituality, co-dependence and strong familial and community relationships is essential. Unlike in communities where a sense of individuality is of primary importance, the informants reveal a social phenomenon where individuals and their aspirations are not so easily demarcated. Instead, within this society, a unified effort appears to be made, with people striving for a good, simple lifestyle, where reciprocity is highly valued.
CHAPTER FOUR
Discussion

The purpose of the present research study was threefold. Drawing upon the theoretical model of the development of children of war by Elbedour et al. (1993), this study aimed at extending this conceptual model to an actual population of children of war in order to examine the effects of war. This study also aimed at rectifying the lack of comparative analysis that has been done with children of war and the lack of proper definitions found in past research studies by including a comparison group and children who have been exposed to various types of traumas and danger. As culture has been a critical factor that has been frequently overlooked in past studies, efforts were made to analyse the effects of war on children incorporating this variable.

It was proposed that children from ecologically stable environments would perform better on tests of cognitive maturity than their counterparts from ecologically unstable environments. Ecologically stable environments in the present research study were rich in good care-giver child, peer and school relationships, stable home and community environments, positive religious affiliations and exposure to the least amount of war danger. In contrast, unstable ecological environments were characterized as having poor caregiver-child, peer and school relationships, unstable home and community environments, no adherence to routines or religious practices and exposure to more war danger.

Based on the relative stability of their ecological environments and level of exposure to danger as presented above, it was hypothesized that the children from the comparison group would perform the best on the measures of cognitive maturity and would appear the most adjusted. It was anticipated that the regular orphans would perform only slightly poorer than the comparison group, followed by the war orphans, and then the refugees, whose performance and adjustment would be the poorest overall.

As war related trauma has been documented to impede development, it was believed that the measures of cognitive maturity would give insight into how well the children were coping in relation to one and other, both between comparison groups of children, as well as between genders. From the results of the present research study, it can be seen that certain hypotheses were clearly supported, while others revealed mixed results. An examination and interpretation of the quantitative results will be discussed in order to understand the relevance of the findings. This will be followed by an
examination and interpretation of the qualitative results.

4.1. Quantitative Data Analysis

4.1.1 Goodenough- Harris Drawing Tests

For the Goodenough-Harris drawing of the man, the results revealed that, as hypothesized, the comparison group secured the highest scores, performing significantly better than the orphans of war and the regular orphans. Contrary to the hypothesis, there was no significant difference between war orphans and regular orphans.

Although the comparison group performed as anticipated on this test, the lack of difference between the groups of orphans was surprising. This results could reflect a number of issues. It is possible that the sample sizes were not large enough to capture the differences. It is also possible that the test measures were not sensitive enough to highlight potential differences.

Supporting and extending the given hypothesis of this research study, it is possible that the two milieus were more similar in their ecological stability than anticipated, with each group either having the same types of relationships and environments or having relationships and environments that had the same effects on development. From the qualitative data, it was noted that for both groups of orphans, strong positive relationships were encouraged between the children, who were encouraged to regard each other as siblings. Strong positive relationships were also established between the caregivers (including community volunteers) and the children, along with strong affiliative ties to the community. These finding concur with past research in which stability across macrosystems, meso and exosystems contribute to healthy development in the microsystem (Vondra, 1990), suggesting possibly that the lack of difference in performance between the two groups of orphans may be a result of similarity across ecological systems, where stability and support were provided.

As anticipated the results of the drawings of the woman revealed that the comparison group scored higher than the war orphans. Counter to the hypothesis, however, no significant difference in performance was found between the regular orphans and the comparison group and the regular orphans and the orphans of war on this test. This lack of difference between the comparison group and regular orphans could suggest potential overlapping similarities between the ecological environments of the regular orphans and the comparison group and the regular and war orphans.

From the qualitative research, overlaps between the comparison group and the regular orphans include, exposure to acute danger from the war and frequent community volunteer support
and caregivers who were emotionally and physically involved with the children. These elements were slightly different when compared to the war orphans, who had less community involvement, less caregiver interaction emotionally and physically, and had been exposed to chronic danger. The overlap between the ecological environments of the regular orphans and the war orphans included loss of mothers, fathers, extended family members and occasionally siblings.

As the results of the qualitative analysis revealed important group differences and similarities in availability and quality of care giving, it is possible that these relationships impacted differently upon the children’s development and ability to perform on the test. It is possible that due to similarities in the quality and frequency of caregiver interaction with both the regular orphans and the comparison group, no difference was found between the two, unlike the war orphans who had less caregiver availability and poorer quality interactions. The lack of difference between the war orphans and the regular orphans could be due to the absence of family members or a more typical family unit.

In conjunction with these variables, the caregivers and volunteers were mainly woman. As the children had more exposure to women, it is possible that the differences, which arose specifically in the drawing test of the woman could be accounted. Exposure to danger was another factor that had potential effects within this drawing test. It is believed that if the element of acute and chronic danger were a significant factor impacting and effecting the children, it would have been consistent across both drawings. It is possible that since this did not occur, the ecological environments may have mitigated the effects of the intensity, duration and frequency of conflict to which the children were exposed.

When testing the effects of gender on the children’s performance on the Goodenough-Harris tests, the findings revealed that, contrary to the hypothesis, girls and boys performed equally well on this measure of cognitive maturity. Based on previous research findings dealing with children of war, it was anticipated that the boys would perform more poorly than the girls as they would have been exposed to more war trauma and were thought to be more vulnerable to the effects of war (Elbedour, et al., 1993, Kuterovac, et al., 1994, Macksoud, 1992).

Potential explanations for this discrepancy in findings could be that, due to the cultural milieu of Sri Lanka, girls were not favoured and sheltered more from the effects of war than the boys, as was the case in other studies of war (Macksoud, 1992). It is possible instead that the boys and girls
in this study were exposed or sheltered similarly, thus resulting in both genders being impacted upon equally by the effects of war.

Another potential explanation for the lack of gender differences in the children's performance on the projective drawings could be that the two samples were not large enough to produce a difference. In order to rule this out, it would be necessary to duplicate the study, with a larger sample population.

One last possible explanation for the lack of gender differences on the tests could be that the ecological environments not only mitigated the effects of war but also, fostered relationships where each gender being nurtured and sheltered equally. In past research, it has been found that children in orphanages tend to cling to same sex peers, with girls being sheltered more than boys (Macksoud, 1992). From the qualitative results, it can be seen that the children within the orphanages were equally cared for and protected and that separation between the genders did not occur. The children were instead encouraged to interact as a family, with everyone being equally responsible for caring for and including each other. Due to the cultivation of these relationships, within a safe environment, it may be possible that the gender effects that usually occur due to the effects of war were negated.

When examining the quality of drawings of the man and woman separately, it was believed that the children would perform better on the drawings of the woman. This difference in drawings was thought to occur because the primary caregivers and volunteers for the children were mainly women. The results however revealed that the children did not draw one set of pictures better than the other. This finding could be due to the fact that, although the children's immediate primary caregivers and volunteers were women, different groups had various levels of exposure and interaction with these women caregivers. It is possible that due to the various levels of exposure, the effects were not robust enough to produce significant results.

Another possible explanation for the lack of difference between the drawing sets could be that children may have had more exposure to men than anticipated. For example, the children from the comparison group would have been exposed to their fathers, uncles and neighbours in their home environment, while the orphans would have been exposed to monks and community members within their home environment. All groups would have had exposure to men through their school and religious environments, thus providing them with exposure to men across all ecological systems.

When analysing both drawings of the man and woman, the results revealed that the girls did
not draw one picture better than the other. This finding was consistent with the boys. These findings suggest that the children did not draw one gender with more precision than the other, which may have been the case if they identified with their own gender, or the gender they had more exposure to, such as their caregivers.

As exposure to violence is a significant stressor related to increased levels of distress (Kutero~ac~ et. al., 1994) it would seem plausible to expect older children to perform more poorly on tests and appear less well adjusted than their younger counterparts. It was hypothesized in this study, however, that there would be no effect of age on the children’s ability to perform on the cognitive measures due to the fact that the children from each group would have had periods of stability preceding exposure to the war.

From the results, it was revealed that age did not have an effect on the children’s ability to perform on the test and it was noted that the older children did not display more disturbances in behaviour. Antithetically the older children in all four categories were observed to engage in nurturing, caregiving behaviours with the younger children. They were also observed to be the most well behaved during activities, attending and listening better than the younger children. As fostering co-dependent relationships was reported by participants as being important in this society, it would seem possible that these values, along with the environments the older children grew up in previous to the warring, would explain the lack of effect of age within this population. This contention is supported by the work of Bowlby (1973), which states that despite modification of cognitive models of relationships due to developmental process and experiences, later models of relationships established by an individual would not be conceived independent from this initial model. Thus if the children had healthy caregiver- child relationships previous to the warring, they would have developed healthy representational models that would influence how they interact with others following their exposure to war trauma.

Despite the aim of this study to examine the cognitive maturity of four comparison groups, it can be seen from the results that statistical data was accrued for only three. Due to the refugees distress during the testing period, the administration of each drawing set was abandoned. Although the group of refugee children did not produce data that could be statistically analysed, their inability to perform due to high levels of distress provides valuable information within itself. As this distress was due in large part to their living status, as documented in the qualitative research, it becomes
imperative to include it in the interpretation.

As illuminated by the qualitative research on the refugee children, it can be concluded that these children existed within unstable ecological environments. Their care-giver child relationships were often poor, as the parents were documented as being very involved in their own distress due to displacement, bereavement and tenuous living conditions. The refugee camps received very little community support, with social support services visiting often only once every week to two weeks. Community support from volunteers was also very poor. This could be because the residents of the camps were Tamil, while the communities within which they were embedded were Sinhalese, therefore resulting in a disparity of language, religious, and culture. The living environments of the refugees were also very unstable, with the refugees often having to deal with a disproportionate number of residents for resource supplies. In addition to having a poor home environment, the refugee children had no school environment in which they participated. Overall, it can be concluded that the refugee had instability within and across every level of their ecological system. As a result of this social impoverishment, the children’s Microsystems were placed at a developmental risk, possible stunting their development. These findings are in accordance with past literature (Vondra, 1990)

It is believed that the stress placed on the refugee children from their environments and lack of supportive relationships, contributed to their inability to perform on the any of the required tasks, thus supporting the contention of this study stating that children from ecologically unstable environments would appear more maladjusted.

4.1.2. Ravens Coloured Progressive Matrices

Supplementing the projective drawing tests, the Raven Coloured Progressive Matrices was conducted. Rather surprisingly, the most significant finding revealed no correlation between the drawing test and the CPM. This could be due to the fact that, that unlike colouring activities, which all of the participants would have been exposed to, the availability of puzzles in this culture was not great. Although the CPM was used for its advantages of being a nonverbal, and culturally reduced testing instrument, it was noted during the second testing period that puzzles were not used pervasively in this society, therefore making this an inappropriate test.

It was believed that due to the differences in the ecological systems of the comparison and regular orphan group, the comparison group would perform slightly better on the CPM than the
orphans. The findings, however revealed that the comparison group and the regular orphans scored equally, with no significant difference found for either age or gender. The fact that the performance levels of each group were equal could suggest that either the ecological environments of the two groups were similar, thus fostering the same type of development, which was reflected on this cognitive test or the children had the same level of exposure, or non-exposure to puzzle like tasks. It is also possible that as the sample sizes of the groups tested were small, differences between the groups may not have been captured. In order to fully understand these results it would be necessary to evaluate the use and value of puzzle tasks within the Sri Lankan community.

4.2. Qualitative Data Analysis

4.2.1. Journal and Interviews

The results from the qualitative data revealed several themes and meta themes, which support the hypothesis of the present research study. When analysed critically, a model can be established from these emergent themes, producing a representation of the various factors that contribute to an ecological system, thus promoting or impeding upon development. The various themes that emerged from this research are shown in Model 1.
Figure 1.

Model A: Emergent Themes and Meta Themes Collapsed
4.2.1.1. Emergent Themes

The three predominant themes, as shown in the Model are relationships, coping and spirituality. From these themes, intertwined metathemes were produced, dealing with practical co-dependent relationships, spiritual coping mechanisms and spiritual relationships. Within the core of these themes and metathemes, issues pertaining to lifestyle, stability and security were constructed. Each theme and meta theme will be interpreted with its relevance to the present study.

From the interviews, the results revealed an emphasis placed on relationships across several systems in which the child was embedded. Each participant discussed relationships involving child-caregiver, family, peer, school and community relationships. Within each relationship, the participants spoke of the necessity to foster safe, secure, and stable relationships with the children.

From the observations of the four groups, differences in the presence and absence and qualities of these relationships were noted. From the results it was established that the comparison group and the orphans had relationships across all ecological systems. while their refugee counterparts had an absence of relationships at certain levels, particularly within schools and the outside community. It can be concluded that the greater availability of relationships across the various subsystems could be a potential factor contributing the developmental health of the children who had relationships between individuals, families and social institutions. In opposition to this, it is possible that the absence of certain relationships could place the refugee children at developmental risk. These findings are congruent with past literature which reveal developmental benefits being derived from children being raised in a socially connected community (Vondra, 1990).

In addition to the presence or absence of relationships across the various subsystems, qualitative differences in the relationships between the four groups were discerned. The comparison group was observed to have the most cohesive, interactive relationships, with ecological subsystems that were the least fragmented. These children came from intact families, where a mother, father, siblings and extended family were often present, with the relationships being distinguished by consistent, emotionally and physically interactive involvement. This quality of relationship was witnessed consistently across the various ecological systems.

Unlike the comparison group, the groups of orphans had a partially fragmented system, in which there was an absence of both mothers, fathers and siblings. Substitute families were created however and within these relationships, the children had strong affiliative bonds. It should be noted
that overall the war orphans had less emotional and physical interaction with their caregivers as well as fewer relationships with the outside community than did the comparison and the regular orphan groups.

The refugees displayed the poorest quality of relationships, with inconsistent interactions with their caregivers, families, and peers, along with no interaction with teachers or outside community members.

These results suggest that, as the quality of relationships degraded across the groups, the more unstable the ecological environment became. With this lack of social cohesion and instability would come an increased risk of the child’s development, thus impeding their ability to cope with the affects of adversity. These findings are supported by investigations of resiliency in children, which conclude that positive caregiver-child relationships, stability within the family and institutions that foster relationships to the larger community act as protective factors for children when coping with various situations (Garnezy, 1991, Mrazek & Mrazek, 1987, Werner & Smith, 1982).

The second predominant theme that emerged from the qualitative data dealt with coping in a practical manner. Within this arena all informants discussed various means by which they actively coped with day to day events, as well as with the effects of the war. It could be seen in the observations that the participants from the more ecologically stable environments tended to be actively involved in coping activities, such as volunteering with neighbourhood programs, exchanging caregiving and domestic duties and fostering reciprocal caregiving relationships between the children. These coping activities were not engaged in by their refugee counterparts, who came from the more unstable ecological environments. In comparison, the residents of the camps tended to display more social isolation and less involvement in the various activities outlined.

The findings dealing with practical coping mechanism are similar to conclusions by past researchers investigating abuse and neglect in children. (Garbarino & Sherman, 1980, Garbarino & Crouter, 1978, Garbarino & Kostlty, 1992). Although these investigations deal with issues of community organization and social coherence, as opposed to coping mechanism specifically, the mechanisms functioning within these ecological environments are believed to be applicable to the present research. Within this literature a consistent pattern has been demonstrated, with high and low risk populations for potential abuse and neglect being defined by the interactions that take place
within an ecological environment. It has been established that, within the low risk neighbourhoods, the participants are more apt to use the neighbourhood as a resource for children, exchange child supervision and use neighbourhood children as playmates. In contrast, high risk neighbourhoods, are characterized by fewer neighbourhood interactions, less self-sufficiency, less reciprocal exchanges and generally less adequate provision of child care. Overall the results of social cohesion or social impoverishment were found to impact on the development of the child (Garbarino & Sherman, 1980).

Although the present study deals with children of war from various social groups, it can be seen that, as consistent with Garbarino and Sherman’s (1980) work, the children can be divided into high and low risk categories, in which the caregivers within the subsystems optimize or diminish the potential for growth within the children’s environments. Similar to the low risk groups identified in Garbarino and Sherman’s (1980) findings, the caregivers of the comparison and orphanage groups cope in such a way that the neighbourhood is used as resource, there is an exchange of child supervision and the children within the institutions are used as playmates. Through this coping style, it is possible that the effects of the war and the various living conditions are mitigated for the children, facilitating healthy development.

Also analogous to Garbarino and Sherman’s (1980) findings is that of the refugee group, who could be labelled high risk. From the qualitative data, it can be seen that the residents in the camps received little social support. In conjunction with this, there is often internal conflict within the camp due to social differences and general distress. As a result, social impoverishment and isolation occurs, with the neighbourhood not being used for its resources and with little reciprocity and minimal exchange. This lack of practical coping could possibly contribute to the instability of the children’s ecological environments, in turn interfering with healthy development.

The third most predominant theme dealt with spirituality. Not only did all informants discuss the importance of spiritual practice in their daily lives, this practice was evidenced in the observations of the lives of all of the participants, with the exception of refugees. Although, each refugee camp was reported to consist of mixed religions the adherence to religious practice was not observed. Within the comparison group, regular orphans and orphans of war, the spiritual practice of Buddhism was adhered to, with the children and the adults meditating, praying and observing the precepts twice daily. As the children were all from Buddhist homes and attended Buddhist schools,
devotion to daily practice was emphasized as being essential, as it was thought to provide the children with guidance and protection, encouraging good lifestyles.

From literature addressing the psychotherapeutic effects of Buddhism, it is revealed that the practice of this spiritual philosophy entails a great deal of psychological sophistication, with practical and theoretical concern with the human character and mental states of individuals. At the core of Buddhism’s conception of human development can be found a propensity for helping people change and overcome emotional suffering. Within its practice, the aim of meditation and mindfulness is to cultivate prajna, or transcendental wisdom. The cultivation of prajna within Buddhism requires the preliminary development of ethical conduct (sila) and a positive state of mind (samahdi). With the practice of the three fold path, including sila, samahdi and prajna, it is believed by Buddhists that healthy mental states can be attained. Through this attainment, loving compassion is achieved not only for one’s self, but towards others as well. Through the practice of meditation and mindfulness on this path, the mind becomes diverted from worry, anxiety, fear, greed, hatred, delusion and other states that may promote unhealthy development, promoting instead compassion, tranquillity, joyfulfulness and clarity (Wray, 1986).

Although the purpose of practising Buddhism has mainly been for the attainment of higher levels of consciousness, its function as a prophylactic for stress has been widely documented in literature. In studies dealing with problems such as addiction, insomnia, and anxiety, meditation has been shown to be an effective treatment (West, 1986). It is believed that through meditation, individuals can become more relaxed, releasing energy to cope with the demands of life. In conjunction with this, the meditative state is thought to be beneficial for the resolution of conflicts, as it allows for a deepening of awareness (Wray, 1986).

From the literature on Buddhistic practice, it can be concluded that the discipline of spirituality within the comparison group and the groups of orphans may help to offer stability within the children’s environments. Due to the underlying nature of the practice of Buddhism, it is possible that the children are offered guidance and psychological protection on both a daily basis and in the face of adversity. As the refugees were not observed to participate in any religious practices, the protective effects of a spiritual practice may not have been existent, thus making them less capable of coping both daily and in the face of adversity.

In addition to these findings, past literature on resiliency in children reveal that, in
combination with other factors, rule setting by adults can function as a protective factor for children when faced with adversity (Herrenkohl, Herrenkohl & Egolf, 1993). As the children from the orphanages and comparison group must contend with routines and rules of their spiritual practice, protection from the effects of war and living conditions may be offered, unlike with the refugees who were not strict in their adherence to religious practices. The function of spiritual practice may thus act to promote ecological stability for these children, potentially mitigating the effects of war and promoting healthy development.

4.2.1.2. Metathemes

From Model A, it can been noted that three metathemes emerged from the intertwining main emergent themes previously discussed. Under the umbrella of relationships, the metathemes of relationships used for coping and relationships of a spiritual nature emerged. The last metatheme dealt with spirituality as a means of coping. Each metatheme will be discussed in turn.

Within relationships used for coping, the qualitative results reveal the predominant theme of co-dependent relationships as a means of surviving on both a daily basis as well as when confronted with adversity. From the results of the interviews, the necessity of co-dependent relationships within the Sri Lankan culture was communicated. These relationships were distinguished across all systems in the ecological environment. Co-dependent relationships were discussed as critical in terms of child rearing, education, work, community services and religious relationships, irrespective of age, family or work status.

Through the observational data, it can be seen that, within the ecologically stable environments, the participants tended to engage in more co-dependent activities as compared to their counterparts in ecologically unstable environments, who tended to be more socially isolated. These findings concur with past research, in which reciprocity and interactive relationships are defined as factors in coping successfully with various living conditions, promoting the opportunity for individual growth, along with family and community cohesion (Garbarino & Sherman, 1980, Vondra, 1990).

The second metatheme dealt with spiritual relationships, in which spirituality was discussed as an important aspect of the interpersonal relationships that existed within the Sri Lankan culture. From the interviews it can be concluded that the fostering of spirituality was pertinent across all ecological systems of the comparison, regular orphan and war orphan groups. Within these groups,
spiritual relationships were established between the caregivers and the children, between the children, and within the home, school and community environments. Within the refugee camps, this form of relationship was not observed. As these relationships existed only within the groups of children that were most well adjusted, it is possible that these relationships contributed to the stabilizing of their ecological systems, potentially mitigating the effects of exposure to war trauma and promoting healthy development.

The above findings concur with previous literature dealing with Buddhism and relationships with others. These findings indicate that the practice of Buddhism within a spiritual community is essential in helping facilitate an individual’s growth and development. In contrast to this, spiritual isolation is reported as hindering such development. As a primary aspect of the practice of Buddhism deals with developing deep friendships with others, the inability to practice due to one’s living and working environment can produce difficulties in being able to change and grow (Wray, 1986). As the children in the comparison and orphanage groups engaged in spiritual relationships on a daily basis, a spiritual community would be created. Within this community, potential for growth and protection would occur. The refugees would not be able to develop or be protected in the same manner as there was an absence of spiritual community.

The last metatheme that emerged dealt with spirituality as means of coping with daily events as well as the effects of the ongoing internal conflict. The informants all discussed the value of their spiritual practice as a means of helping others and themselves, stressing that through prayer and meditation they would ask for protection and courage to survive. These findings are again supported by past literature dealing with the underlying principles of the Buddhistic practice, in which protection is gained through regular practice of mediation and mindfulness (Ray, 1986, West, 1986, Wray, 1986).

As can be seen from Model 1, at the crux of the themes and metathemes emerges three final themes of lifestyle, stability and security. Although the informants discussed these concepts separately, a closer examination reveals that these core themes develop as a result of the combinations of themes and metathemes previously discussed. In order to understand the core concepts, they must not be examined separately but as a part of a process of the interaction between the overarching variables outlined in the model.

From the interviews, it can be seen that the informants discussed the importance of living a
good, simple life. This type of lifestyle was defined by religious practice, co-dependent relationships and active involvement with others, whether it be for teaching, helping, or simply fostering relationships. The informants all spoke of the importance of not placing value on material things, but to live a life of simplicity. From these discussions, it can be seen that the various aspects of relationships, coping and spirituality are drawn upon in order to cultivate a good life. In this same way, stability and security are also achieved, with all factors interacting.

Past literature has stated that there is no single thread that holds a strong family together, but rather a web of personal and social resources, where protective factors involve interactions between both individuals and their environments. Through these interaction, the fostering of a forum for healthy development can emerge (Garbarino & Crouter, 1978, Herrenkohl et. al., 1993, Vondra, 1990). From the results of the present research study it can be seen that these findings are supported, with evidence for the children who were more well adjusted in their development coming from environments rich in social cohesion and stability, while their less well adjusted counterparts were found to reside in ecologically unstable environments. From this study, it can also be concluded that ecological stability is formed through an interactive process between certain variables and their by-products. As stated in past literature, these results reflect the notion that healthy development is a process that occurs between people and their environments which must be examined holistically in order to comprehend.
5.1. Summary

In summarizing the findings of the present research, it can be stated that the overall assertions of the investigation were supported. Through a triangulation of data, it was revealed that the children who were most adjusted and who performed most successfully on the tests of cognitive maturity resided in the most ecologically stable environment. Within these environments, these children were revealed as having positive relationships across all systems in their ecological environment. These relationships were defined as being very consistent and interactive, both emotionally and physically. Within these groups, these children were documented as having involvement in stable home, school, community environments with the cultural variable of strong religious affiliations and practices being critical.

This study also revealed that, as hypothesized, the children that were the most maladjusted and who performed most poorly on the tests of cognitive maturity resided in ecological environments that were unstable. These environments were characterized as having poor caregiver-child, peer, and community relationships, with an absence of school relationships. The home and community environments were found to be unstable and socially impoverished. Adherence to religious practices was not observed within these communities.

The effects of exposure to war, regardless of the intensity, duration and frequency seemed to be inconsequential as the ecological environments appeared to mitigate the effects of trauma. This was highlighted by the findings that revealed little or no difference between the groups that were exposed to chronic and acute danger, but who had similarities of ecological systems. It was believed for this reason, that the environments and the relationships that were formed within these environments acted to promote healthy development, protecting the children from the adversities of war.

5.2. Limits of the Study

Although the contentions of this investigation were supported, it is believed that the study was influenced by certain limitations. The primary limitation of this study dealt with the testing tools used to measure the cognitive states of the children. As the children were from a non-English speaking, Sri Lankan population, it was imperative to use testing measures that were as culture
reduced and language free as possible. Although the projective drawings were informative, it was found that the marking scheme of the drawings had elements that were Western influenced, such as the clothing that was depicted. Although these elements were acknowledged and accommodated as best as possible throughout the study, it is plausible that the results of the testing were influenced by this disparity.

Another limitation of this study was regarding the use of the CPM. Although this test has been reputed as being universally applicable, it was found to be inappropriate, as there appeared little availability or importance placed on puzzle-like tasks within this culture. By using tests that accommodated for Eastern influences, it is believed that more precise findings could have been gathered.

An additional limitation of this study dealt with sample sizes. As the findings of the drawings revealed the patterns that were anticipated, at times they were discerned as not being statically significant. If the sample sizes were larger, it is possible that more robust effects may be have been secured.

One last limitation to this study was that it was not possible to secure interviews with participants from the refugee population. Although information of the refugees and their milieu was gathered through participant observation and through interviews with an informant who worked closely with the refugee population, the richness and the breadth of the study would have been increased through an interview with a participant from the actual camp milieu.

5.3. Conclusions

Despite the limitations of this study, it can be concluded that the purpose of the investigation was achieved, applying the theoretical ecological model of development as proposed by Elbedour et al. (1993) to an actual population of children of war. In addition to extending this conceptual model, the opportunity to examine a population of war frequently overlooked in the literature was presented. By examining the children from Sri Lanka using this ecological integration, it was possible to develop an understanding of the effects of war and the potential mitigating factors that may arise through participation in various ecological systems.

From this investigation, it can be concluded that the findings support the notion that ecological environments can impact on the development of a child and can function to protect them when faced with adversities, such as the effects of war. In accordance with past literature, this study
demonstrated that stable ecological environments, with social cohesion across subsystems can function to promote healthy development, acting as a buffer for trauma and promoting psychosocial resilience. It was found that unstable ecological environments, highlighted by social isolation and impoverishment acted to impede on the child’s development.

Extending on previous studies dealing with children of war, the cultural variable of religious affiliations and practice was found to be an important element, critical in strengthening a system’s cohesiveness and offering a child protection when confronted with adversity.

Drawing from the results of the present investigation, it can be concluded that the effects of war, regardless of the duration, frequency and intensity, were mitigated by stable ecological environments established within the orphanages and the comparison group. The children within the unstable ecological environments were believed to be lacking in the protective elements that arise from being in a socially cohesive environment, which was highlighted in this study by the refugees.

5.4. Suggestions for Further Research

As war is a prevalent social issue that has been documented to have increasing effects on civilians, it is crucial that future research be conducted in this area. Studies in the past have mainly examined factors that effect children of war in isolation. As children are a part of a dynamic system, it is important that future studies be conducted using a systemic approach. As the results of this study have revealed the benefits of a protective stable ecological system, it would be beneficial to continue work in this domain.

It is believed that this study could be used as a springboard for future research. As this study was influenced by certain limitations, future research could involve duplicating this study, using larger sample sizes and more appropriate testing measures in order to confirm and potentially secure more robust findings.

As the findings of this research suggest the importance of social cohesion, it would be interesting to implement social service programs for groups of war victims, which foster relationships between caregiver-child, peers, teachers, and community members, in conjunction with promoting environmental stability. These programs could include educational information about how to use the neighbourhood and neighbours as resources for support, having drop in centres for social support and also, the promotion of religious practices and attendance of make shift places of worship if nothing formal is available. It would be interesting to conduct research with these groups
previous to the implementation of the programs and after they have been running for a period.

Future research could also involve examining a population that has religious beliefs that are not Buddhistic, as it would be interesting to understand the effects of particular religious practices.

As the population that was investigated in this study is frequently overlooked in the literature, future studies within Sri Lanka are necessary as they would not only allow us to further understand the effects of war on these children in particular, but may offer us further insight into the phenomenon of war and its global effects.
References


Appendix 1: Summary Table: Overall Data Gathered and Analysed in Phase One & Two

Data: Phase One

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Projective Drawings</th>
<th>Ravens CPM</th>
<th>Journal</th>
<th>Interviews</th>
<th>Researcher’s Observations</th>
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<tbody>
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<td>Group A: Montessori</td>
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<td>Group B: War Orphans</td>
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<td>Group C: Regular Orphans</td>
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<td>Group D: Refugees</td>
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- **Group A: Montessori**
  - students: X
  - caregivers: X
  - teachers: X

- **Group B: War Orphans**
  - orphans: X
  - caregivers: X
  - volunteers: X

- **Group C: Regular Orphans**
  - orphans: X
  - caregivers: X
  - volunteers: X

- **Group D: Refugees**
  - refugees: X *
  - caregivers: X
  - volunteers: X

*drawings attempted but abandoned for ethical reasons*
### Data: Phase Two

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<th>Institutions</th>
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<th>Journal</th>
<th>Interviews</th>
<th>Researcher's Observations</th>
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