

**A CRITICAL EVALUATION OF A COMMUNITY BASED
MOTHER-INFANT INTERVENTION PROJECT WITH SPECIAL
EMPHASIS ON INFANT ATTACHMENT**

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Piglet sidled up to Pooh from behind.

“Pooh,” he whispered.

“yes, Piglet?”

“Nothing,” said Piglet, taking Pooh’s paw.

“I just wanted to be sure of you.”

- A.A. Milne

Winnie-The-Pooh

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And finally, many thanks to my parents for the gift of an inquiring mind, and for your absolute faith and patience in a journey which must have seemed eternal at times.

ABSTRACT

This dissertation critically evaluates a community based mother-infant intervention project in Hanover Park, a deprived area of Cape Town, characterised by poverty, gangsterism and high levels of unemployment. The aim of the project was to assess the impact of an intervention programme in preventing child abuse and neglect and promoting more nurturing parent-child relationships. The sample was drawn from clinic records at the Hanover Park Mid-Obstetric Unit. Twenty-five mother-infant dyads were initially chosen based on high levels of stress and assigned to the intervention group. A control group was subsequently chosen, also drawn from clinic records as well as being matched with the intervention group. Subjects in the intervention group received weekly visits for a two-year period from family support workers, all of whom lived in Hanover Park. The intervention was based on the Healthy Start Programme as developed in Hawaii. A basic socio-demographic questionnaire was administered at the beginning of the project. Mothers were assessed for postnatal depression using the Edinburgh Postnatal Depression Scale. Anthropometric data was collected throughout the project. At the end of the two-year intervention, infants were assessed using the Griffiths Scales of Mental Development and Ainsworth's Strange Situation. The results were statistically analysed for relationships and differences according to group. Findings revealed that there were no significant differences between the intervention group and the control group on any of the outcome measures. A trend was detected with the Strange Situation results and a power analysis was conducted in order to determine requisite sample size for significance to have been achieved. The result of this algorithm were that for significance to have been achieved (assuming the trend were to continue) a sample size of 74 in each group would have been required. A discussion is presented in terms of the implications of the findings for the utilisation of the Strange Situation measure in a diverse cultural context such as South Africa, as well as the broader cultural implications for the study of attachment in future studies. A detailed methodological and theoretical critique of the Hanover Park Project is also presented in order to glean important lessons for future intervention studies, and more particularly for a treatment-trial which is at present being conducted in Khayelitsha.

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LIST OF ABBREVIATIONS USED IN TEXT

DSMIV	Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) (American Psychiatric Association, 1994).
EPDS	Edinburgh Postnatal Depression Scale
HFSC	Hawaii Family Stress Centre
MOU	Mid Obstetric Unit
RDC	Research Diagnostic Criteria
χ^2	Chi-square

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Mental health clinicians and researchers face a formidable task over the next decade to come: *to persuade society and its agents, the politicians and the administrators of mental health budgets, to invest in the mental well being of infants, to accept and internalise what we all believe to be a fundamental truth of our field, that the preservation of the mental health of infants is the key to the prevention of mental disorder throughout the life-span* (author's emphasis) (Fonagy, 1998, p.126).

1. FOREWORD

In order to situate the present dissertation, both a biographical as well as a contextual preamble is in order. The aim of this will be to both locate the genesis of this thesis historically, as well as to explain its unusual structure and figuration.

In 1996 the University of Reading (United Kingdom), and the University of Cape Town began planning a collaborative study to determine whether, in Khayelitsha, a deprived South African peri-urban community, the adverse impact of maternal postpartum depression could be mitigated by an intervention designed to improve maternal mood and enhance the development of the early mother-infant relationship¹.

Concurrent with this (and during the course of completing my MA Clinical Psychology I year), I became interested in the field of infant attachment, fuelled both by a long standing interest in infants and children, and a number of informal discussions with my clinical supervisor at the time. In preparation for the starting of the envisaged intervention project and as a result of an expressed desire on my part to become involved in this area of infant research, I attended a course on the coding of Ainsworth's (1978) Strange Situation at the end of 1996.

While funding had been sought for a four-year intervention study, the funders² requested that a one-year epidemiological study be completed first. The reasoning was two-fold: epidemiological research

¹ This dissertation will make use of the convention (throughout) of referring to the parent as 'female' and the child as 'male'.

² Wellcome Trust.

investigating the incidence of postpartum depression in Khayelitsha had not been completed; secondly this information was required so as to run a power analysis in order to determine sample size for the proposed treatment trial. A one-year epidemiological project studying the prevalence of postpartum depression and associated disturbances in the mother-infant relationship in Khayelitsha began in April 1998 (Cooper et al, in press). Through a combination of factors, both planned and fortuitous, I took up the position of Project Manager of this epidemiological study.

The four-year intervention programme remained as the long-term goal with the funders having invited a re-submission once the epidemiological findings were available³.

1.1 THEORETICAL AND METHODOLOGICAL QUESTIONS

During early 1998 a number of crucial questions arose which I felt needed to be addressed with regard to the envisaged treatment trial. Firstly, with respect to attachment, I argued (Tomlinson, 1997) that unanswered questions remain regarding the cultural validity of using the Strange Situation in an African context. This was of particular relevance given that the Strange Situation was to be used in assessing attachment status in the intervention study (see Chapter 2.6 for a discussion of attachment and culture). Secondly, the funding received for the epidemiological study did not include provision for a pilot study; this has important methodological implications for the design and implementation of a large randomised controlled trial in a peri-urban settlement in South Africa (Olds, 1988).

Between 1996 and 1998 a pilot intervention study (hereafter referred to as the Hanover Park Project) was conducted with an at-risk sample of mothers in Hanover Park, an area characterised by widespread unemployment, gangsterism, poverty and high levels of child abuse and neglect. (See Appendix 1 for a brief outline of the history and socio-demographics of Hanover Park.) The aim of the project was to reduce the incidence of child abuse and neglect and promote more nurturing parent-child relationships (Landman, 1995). Because of a lack of capacity on the part of those who had conducted the intervention, I was approached to write up the project. I agreed to do this as it gave me an opportunity to pinpoint some preliminary aspects of attachment in South Africa as well as to glean important lessons pertinent to the treatment trial.

It needs to be stated at the outset that my involvement therefore began well after the actual completion of the Hanover Park study. I was not involved at any stage in the design of the study, nor did I have any input in decisions concerning the assessment measures and process, the intervention nor the follow up of mothers.

³ Funding has subsequently been secured for the four-year intervention programme – now known as the Thula Sana Project.

This dissertation will approach the subject of attachment and treatment trial interventions by providing a short outline of the genesis of the Hanover Park Project. This will be done in order to situate the later discussion. This will be followed by a review of attachment issues pertinent to this dissertation, as well as a brief introduction to the Strange Situation in Chapter 2 (developed further in Chapter 3.2.2). Finally in this chapter, I will focus on the role of intervention in mother-infant attachment and the issue of attachment and culture.

Chapter 3 will discuss the Hanover Park Project in more detail, its methodology, the recruitment of mothers, the actual intervention and finally the various assessment instruments.

This will be followed in Chapter 4 by an analysis of the attachment findings and a discussion of the implications these findings might have for the valid use of the Strange Situation in South Africa, and more broadly provide a platform for future work on attachment and culture. In this regard, following the inconclusive findings from the Hanover Park Project (see Chapter 5) a short discussion will be presented in order to illuminate a contemporary theory which conceptualises the area of attachment and culture so as to be able to recommend alternative methods of data collection.

Chapter 5 will present and discuss the remaining results from the Hanover Park Project.

A methodological and theoretical critique of the Hanover Park Project and the implications for the Thula Sana mother-infant project will then be presented in Chapter 6. This will follow the work of Olds (1988) and Olds and Korfmacher (1997) who has in an ongoing way evaluated and developed his various projects.

In the light of the fact that this is a pilot study, Chapter 7 will make a number of recommendations for future treatment trials in this area, and more specifically the Thula Sana mother-infant project.

1.2 GENERAL BACKGROUND TO THE HANOVER PARK PROJECT

The period immediately after birth has long been considered to be a critical period in which to intervene with the newborn, the maternal-child dyad and the wider family. Brazelton goes so far as to describe this period as a "touchstone" in order to emphasise its importance (1995, p.158). Research into infant development (social, emotional and perceptual) has grown enormously in recent years, and interactional studies have flowered yielding a great deal of quantitative data (Brazelton & Cramer, 1991).

According to Olds, Henderson, Kitzman, Eckenrode, Cole, Tatelbaum, Robinson et al 1998)

many of the most intractable problems faced by young children and parents in our society today are uniquely associated with adverse maternal health-related behaviours during pregnancy, dysfunctional infant care-giving, and stressful environmental conditions that interfere with parental and family functioning (p.79).

The authors go on to state that problems may include low birth weights, pre term delivery, child abuse and neglect, and youth violence amongst others. In response to research findings suggesting the link between early mother-infant interactions and later problems, numerous intervention studies aimed at preventing these outcomes have been developed and implemented throughout the world (Cooper and Murray, 1997; Field, 1977; Olds, 1988; Olds and Korfmacher, 1997; 1998b; van den Boom, 1994).

The Hanover Park Project was an attempt to implement an early intervention study in a high-risk sample of South African mothers and infants. Olds (1997) and Olds and Korfmacher (1998a) have over the past fifteen years conducted a series of randomised trials in Elmira, New York; Memphis, Tennessee; and Denver, Colorado all examining the impact of early programs of prenatal and early childhood visiting programs which aim to improve parental behaviour and environmental conditions and in so doing prevent the above mentioned child and maternal problems. While Olds' studies are significantly different in a number of respects from the present Hanover Park study, this dissertation will use Olds' research as a model with which to evaluate the present pilot study.

1.2.1 GENESIS OF THE HANOVER PARK PROJECT

The Parent Centre⁴ (Cape Town) initiated the Hanover Park Project in 1993. The initial impetus for the study arose out of a number of existing projects, which had begun at the Parent Centre in the late 1980's and early 1990's. The primary focus of these projects was to provide emotional support to new mothers who were experiencing difficulties related to the birth of a child and arising from this, various family difficulties. One of the initial responses to the needs of these new mothers was to provide them with a place to meet and in so doing provide mutual support for one another.

⁴ The Parent Centre is a non-governmental organisation, which works in a preventive way with families experiencing difficulties providing information, support and counselling around parenting issues.

One of the consequences of these mornings was the realisation that postnatally depressed⁵ mothers were typically experiencing difficulties in socialising and were struggling to make use of the mutual support provided by the other mothers. As a consequence groups aimed specifically at postnatally depressed mothers began in 1984.

These groups ran successfully for a number of years but they were, to a large extent, being utilised by white middle-class mothers and there was a desire to reach a broader spectrum of mothers.

Concomitant with this there was a shift away from centres in the suburbs to exporting the services into the communities and to places where mothers met (clinics, schools and crèches).

In 1993 the Hawaiian Healthy Start Programme, (which had been running successfully in Hawaii in the United States since 1985) was adopted by the Parent Centre. The Healthy Start Programme is aimed at providing support to mothers and their infants who were assessed as being at risk.⁶ A discussion of the Healthy Start Programme is not within the scope of this dissertation. (See Appendix 12 for the Hawaii Department of Health's outline of the programme.)

Following a needs analysis and an investigation into service provision, Hanover Park was chosen as the site for the project. Hanover Park, of all the areas falling under the auspices of the Child Welfare protective teams, had the highest number of reported cases of child abuse and neglect⁷ (Landman, 1995). The project was mooted in April 1993 and took approximately ten months to set up.

As will be discussed in more detail later, two main areas of the Hanover Park Project will be focussed on in this dissertation. In the light of problems with methodology, Chapter 6 will critically analyse the planning, theoretical foundation and methodological limitations of the project. Of great interest to myself (and of particular importance to questions raised by working in different cultures in South Africa) is that of attachment. This includes issues about the validity of using the Strange Situation measure firstly as a measure of quality of attachment, and secondly using it in cultures significantly different from white middle-class America (Tomlinson, 1997). The next chapter will outline some of the attachment issues pertinent to this dissertation and provide a platform for the later discussion.

⁵ The term postnatal depression is used loosely here and should not imply a DSMIV diagnosis as might be the case if maternal mental state was being assessed using the depression section of the SCID in establishing a DSMIV diagnosis (First et al, 1996).

⁶ According to Rawlins (1999), many of the intervention programmes which are at present being implemented in the USA are based on the Hawaii model.

⁷ In March 1993 47 cases of neglect, 8 cases of physical abuse and 5 cases of sexual abuse were reported and 9 children needed to be removed following a Children's court inquiry (Landman, 1995).

CHAPTER TWO - ATTACHMENT: REVIEW OF ISSUES PERTINENT TO THIS DISSERTATION

2.1 INTRODUCTION

From the virtual banishment of John Bowlby from the psychoanalytic world in the 1960's (which Grotstein described as "one of the most dreadful, shameful and regrettable chapters in the history of psychoanalysis" [Grotstein, Quoted by Holmes, 1995]), to Mary Ainsworth and her followers' attempts to secure 'respectability' for her Strange Situation measure and finally to the ongoing debate as to the role of the mother in the emotional development of the child and the resulting controversy over the merits of child care at home or in the nursery, attachment theory has never been far from controversy.

The development of the Strange Situation occurred in a white middle class American context, and therefore any extrapolation to our context needs to be thoroughly explored. The paucity of research in cultures which are less Western oriented or wealthy (studies in this area have concentrated to a large degree on countries such as the United States, Germany and Japan) (Van Ijzendoorn and Kroonenberg, 1988) makes this discussion on the one hand difficult but on the other novel.

The present chapter will briefly outline the development of attachment theory in Britain and the United States as this is germane to any discussion of attachment. Following this the biological and philosophical underpinnings of attachment theory will be presented to highlight some of the issues as to whether attachment patterns are universal and thus useful in our context. Mention will also be made here of research in the field of intervention in affecting/changing attachment style. Finally, this section will look at culture and attachment and assess the relevance of these in the Hanover Park Project.

2.2 ATTACHMENT THEORY: DEVELOPMENT AND EARLY CONCEPTS

Two figures are central in the field of attachment theory - John Bowlby and Mary Ainsworth. While they worked apart for most of their lives, they are inextricably linked in the development of attachment theory as we understand it today.

In 1948, Bowlby hired James Robertson to assist him in the observation of children who had been separated from their caregivers as a result of a stay in hospital. Hospital policy in the United Kingdom stipulated that parents were only to visit their sick children for a very short period each day, and the resultant distress of the children was interpreted as "atypical until they became settled,

and uncomplaining" (Senn; Quoted by Bretherton, 1995b). The result of Robertson's observation was a film entitled 'A two-year-old goes to hospital' which not only "played a crucial part in the development of attachment theory, but also helped improve the fate of children in hospitals in Britain and many other parts of the world" (Bretherton, 1995b).

Harlow's experiments in the 1950's proved that "contact comfort" played a critical role in the formation of social relationships (Lamb et al, 1985). Harlow described what he was seeing as an 'affectionate system' between the mother and the infant (Quoted by Grossman, 1985).

Holmes (1995) sees three key papers by Bowlby (all initially published in the *International Journal of Psychoanalysis*) as launching attachment theory. The first was entitled 'Nature of the Child's Tie to his Mother' (1958), and which later became the book *Attachment* (1969). In this article Bowlby argued that the primary attachment between the mother and the infant was "wired in" (Mitchell, quoted by Holmes, 1995). The role of this in evolutionary terms was protection from predation. The second was entitled 'Separation Anxiety' (1960) which was later expanded into the book *Separation* (1973). In this article Bowlby argued that the separation anxiety of the child was an affective response to threat (Holmes, 1995). The third article was the 'Processes of Mourning' (1961), later to become the book *Loss* (1980). The crucial element of this paper was Bowlby's assertion that infants could experience loss and mourn, much like adults do - his evidence for this was Robertson's film.

2.3 ATTACHMENT THEORY: BIOLOGICAL UNDERPINNINGS

Harlow's research, as well as Bowlby's early discussion of what he termed 'maternal deprivation' (Holmes, 1995) led Bowlby to believe that "there was an innate 'need' for social interaction in human infants that eventually became focussed on a specific figure" (Lamb et al, 1985, p.12). Out of this early thinking Bowlby looked to the evolutionary biological model.

The evolutionary model emphasised the importance of natural selection in shaping the behavioural repertoire of any species - eliminating behavioural patterns that did not promote species' survival and spreading through the population behaviours that enhanced the species' success (Lamb et al, 1985, p.13).

Bowlby argued that in the savannah grasslands where humans evolved, proximity to a caregiver was vital for protection from predation, and thus for survival. Because human beings are not able initially to seek proximity to mother by means of their own locomotion, signals are immensely important to

signal distress for instance, and thus ensure proximity. Examples of important signals in the new-born human infant are crying and smiling. (Lamb, 1985).

Because the functional efficacy of such proximity/contact promoting signals depends upon the promptness and appropriateness of the adult's response, mutual responsiveness and interaction become critical in humans. Thus infants become attached to individuals who consistently and appropriately respond to the infant's proximity-promoting signals and behaviours (Lamb, 1985, p.13).

Equally, for this to be effective, adults must also be equipped with responses which ensure care taking of the infant (Lamb, 1985).

Bowlby proposed four systems, which worked to control the infant's behaviour. The *attachment behavioural system* maintains proximity/contact to the attachment figure. How much contact would depend on the individual and importantly the context. The second system is the *fear/weariness system*. The function of this system is first and foremost the escape from danger. The final two behavioural systems come into operation once the infant has determined that there is no reason to fear, and are the *exploratory* and *affiliative* behavioural systems (Lamb, 1985).

2.4 SECURE BASE CONSTRUCT

A central concept within attachment theory and by extension Ainsworth's Strange Situation is the secure base construct.

As a result of the security or trust that children derive from either the actual physical presence or the internalised working model of the attachment figure, children are able to explore and to learn, free of an overly anxious concern about the accessibility of the figure

(Cicchetti et al, 1990, p.18).

In operational terms, the secure base is the balance between the infant's desire to explore the environment and the need for proximity to the attachment figure. As the child gets older, the distances that the child will travel from the attachment figure will increase. Much of this is facilitated by other developmental changes which the growing child undergoes at the pre-school level. These changes would include the improvement in the child's cognitive ability in representing and thus anticipating the various moment to moment changes in proximity with the attachment figure. The

increasing need for individual mastery and also the ability to make use of communication to regulate contact with the caregiver also facilitate the child's development of a secure base from which to explore the world (Cicchetti et al, 1990).

In conclusion Cicchetti et al state that

From an organizational standpoint, the sense of felt security is now regulated by physical proximity and by these higher level cognitive and communicative skills of which the child is now capable

(1990, p.18).

2.4.1 THE STRANGE SITUATION

The Strange Situation was developed by Mary Ainsworth in the late 1970's in an attempt to operationalize and provide a measure for the attachment ideas of John Bowlby. The Strange Situation is an experimental procedure comprising seven three-minute episodes of successive separations and reunions between the mother and her infant, with the introduction of a stranger at various points in the procedure. It is conducted in a playroom with chairs for the mother and stranger, and toys for the infant.⁸

The Strange Situation procedure is filmed from behind a one-way mirror and infant-adult interaction is then coded on a seven-point scale, which describes important elements of the interaction. These include proximity and contact seeking, contact maintaining, resistance to contact or interaction and avoidance (Ainsworth et al, 1978).

Following this coding infants are then classified into one of three groups (A, B, C). Group B infants are considered to be 'securely attached' while A and C infants are considered to be 'insecurely attached'. Group A infants are considered to be 'insecure-avoidant', while C group infants are termed 'insecure-resistant' (Ainsworth et al, 1978).⁹ In addition, these three groups are then also divided into eight sub-groups (see Appendix 2 for a brief description of the attachment classification categories).

⁸ See Chapter 3 for a more detailed description of the episodes, and Appendix 6 for the scoring of the interactive behaviour.

⁹ In Ainsworth's initial classificatory system there were three main groups (1978). Main (1986) has subsequently developed a fourth category (disorganised – D) which is an attempt to account for those children whose attachment behaviour is not coherently organised as is the case with those falling into one of the other three categories. Behaviours may include atypical movements, and this category is often suggestive of abuse.

2.5 STABILITY OF ATTACHMENT CLASSIFICATION

Connell and Goldsmith (1982) state that one of the main arguments for the validity of the A,B,C typology as a measure of quality of attachment is the stability of the classification over time. Waters (1983) has argued that determining the stability of Strange Situation classification is essential in analysing behaviour during the procedure. In extending this argument Belsky et al (1996) argue that if attachment classification proves to be unstable, the reliability of the Strange Situation as a measure of attachment will be questioned.

Waters (1978) in the first stability study assessed 50 middle-class infants first at 12 months and then at 18 months. He found an overall classification stability of 96%. No other study has found comparable stability rates, particularly with similar populations. Egeland and Sroufe (1981) found an 81% stability rate, but this was with 32 lower income mother-infant dyads. Broadly stability figures include figures of 48% (Egeland and Sroufe, 1981), 53% (Thompson et al, 1982) to 60% (Egeland and Farber) and 73% (Main and Weston, 1981). Belsky (1996) argues that these studies laid the foundation for a presumption of Strange Situation stability despite the fact that most of the studies relied on significance testing which did not correct for chance associations and were based on small sample sizes.

In a similar way to stability studies, a number of projects have been conducted in order to assess the predictive power of the Strange Situation. (Arend et al, 1979; Easterbrooks and Lamb, 1979; Erickson et al, 1985; Lamb, 1985; Lieberman, 1977; Londerville and Main, 1981; Lutkenhaus et al, 1985; Main and Weston, 1981; Matas, 1978; Sroufe, 1983; Sroufe et al, 1983). See Appendix 3 for a short discussion of some aspects of this research.

2.6 ATTACHMENT THEORY AND CULTURE

Given that the Strange Situation was developed in a middle class American context, it is important that the issue of culture (and the relevance of the Strange Situation to the Hanover Park community) is considered. At the outset it should be stated that studies on cross cultural differences in Strange Situation classifications have been limited to countries such as Japan, Israel, Germany and the United States with little data having been collected from less Western oriented cultures or lower income countries such as in Africa and South America.

One of the largest studies to be undertaken outside the United States of America was conducted in Germany (Grossman, 1985). Grossman attempted to replicate Ainsworth's original Baltimore study

(Ainsworth and Wittig, 1965) with a group of infants in Bielefeld, West Germany. An important finding (which differed markedly from Ainsworth's American study) was that many more West German infants behaved avoidantly than American infants. The explanation for this was that West German mothers were more concerned about independence training than were American mothers. Ainsworth (in looking at the data) concluded that the mothers of the avoidant German children were insensitive (Lamb et al, 1985). The implication was therefore that half of West German mothers were insensitive. Lamb argues that an analysis such as this is problematic in that it raises questions about employing one culture's definition of desirable 'mothering' on another.

Lutkenhaus (1984) observed 44 of Grossman's sample at age 3 in their homes. They found that A children were significantly less ready to engage a visitor than were B or C children (between which there were no differences. (Quoted by Lamb, 1985).

Lamb, Hwang, Frodi and Frodi (1982) studied Swedish mothers and infants and found a distribution very similar to Ainsworth in Baltimore. Differences that did exist were not significant. Swedish children did however show less distress than American children did during separation episodes. A problem with this research is in terms of what the Strange Situation means for Swedish children, as the study was not successful in identifying links between parental attitudes and behaviour (antecedents) to behaviour in the Strange Situation (Lamb et al, 1985). This possibility was strengthened by a report which indicated that the children's Strange Situation classification was unrelated to Swedish infants' sociability with unfamiliar adults (something which was not the case in the United States and Israel).

Sagi et al (1985) studied 86 children living in central quarters on a Kibbutz in Israel. Infants were seen in the Strange Situation three times - once with their mother, once with their father and once with their caretaker on the Kibbutz. Results of this study were that there was a difference in distribution of classifications from the American sample. One of Sagi et al's (1985) hypotheses to account for the higher distribution of C classifications in the Kibbutz sample was that the nature of the child care arrangements (such as multiple caregivers) fostered insecurity in the children.

Another finding in the Kibbutz study was that Israeli infants were extremely distressed by the stranger. Sagi et al's hypothesis was that the small closed in nature of the group living on a Kibbutz, infants were rarely exposed to any strangers at all. An American infant would, for example, have a great deal of exposure to strangers in interactions such as in the supermarket. Lamb argues however, that not all of the infants were afraid of the stranger, and that therefore the cultural explanation of the children having little exposure to strangers is not entirely tenable (1985, p.194). He argues that other

factors such as insecurity and temperament must also have interacted with the lack of experience of strangers, such that some infants were considerably more afraid of the stranger than others.

Lamb states that the most important finding of Sagi et al's Israeli findings is that

if a procedure is to provide a valid and comparable assessment of infants and/or infant-adult relationships in different cultures, it is crucial that the experience be psychologically similar for all infants, or that we know how and why the experiences are dissimilar and can adjust our judgements to take the dissimilarities into account (1985, p.194).

Miyake et al (1982, Quoted by Lamb, 1985) found that amongst Japanese infants there were an unusually high number of C group infants. Japanese infants were highly stressed by the Strange Situation procedure, and in fact, in many cases mothers refused to consent to leaving their child alone in the room. Miyake et al argued that the high stress level of Japanese infants may have had to do with different child rearing practices in Japan where infants at the age of one, still sleep in the same bed as their mothers, and as such are unfamiliar with even the briefest of separations.

Arising out of questions posed by Ainsworth et al (1978) concerning studies in some countries which seemed to show that there were differences in attachment classification distributions in different cultures, Van IJzendoorn and Kroonenberg (1988) considered the "largest data base of Strange Situation classifications" (p.148) and compared individual samples with a global distribution. Their intention was to gain a more appropriate perspective on sample-specific variations. According to Van IJzendoorn and Kroonenberg, Lamb et al (1985) for example did not compare the large intra-cultural variation of the United States with that of non-American distributions: In addition they assert that it was not clear whether "the much discussed deviations from the American standard distribution are as dramatic as is often suggested" (Van IJzendoorn, 1988, p.148).

Van IJzendoorn and Kroonenberg (1988) found that intracultural variation is nearly 1.5 times the cross-cultural variation, and that the B classification was modal in all countries. The authors conclude that

therefore, given that the Strange Situation is a valid instrument for measuring attachment quality in the United States, there is no reason to doubt its cross cultural validity only because cross-cultural sample distributions

differ from Ainsworth et al's (1978) "standard"

(Van IJzendoorn and Kroonenberg, 1988, p.154).

In accounting for the relatively small cross-cultural differences, the authors suggest the influence of the mass media (particularly in the Western world) which advocate similar methods of child rearing. They go on to conclude however, that data is needed from less Western-oriented cultures such as Africa and South America in order to

establish a more truly global and better-informed cross-cultural perspective on inferences to be derived from differences in distributions of Strange Situation attachment classifications (Van Ijzendoorn, 1988, p.154).

2.6.1 MULTIPLE CAREGIVING

Jackson (1993) approaches the question of the Strange Situation and its cultural validity from the point of the common experience of multiple care-giving among African Americans. Jackson argues that the early assumptions of attachment theory were negative about the effects of multiple caregivers on the infant. This arose out of an assumption of Bowlby, which is that a principal mother figure providing continuous care is what the infant needs, and that the diffusion of infant care is damaging. Jackson also discusses Bowlby's ideas of monotropism (hierarchy of preferences -with the mother usually being highest in the hierarchy) and that attachment theory was an 'extra cultural approach', as the notion of survival value is common to all primates (Jackson, 1993, p.89). The notion of a hierarchy of preferences suggests that the infant will have stronger attachment and exploratory responses to one attachment figure. In questioning this Jackson describes the semi-nomadic Efe of Zaire, where multiple care-giving is the norm.

In discussing the issue of culture in the Strange Situation, Jackson states that contrary to the popular view that because Ainsworth's initial study was conducted in Uganda it was culturally relevant to Black Americans, she would argue that the Ganda in fact resembled white middle class Americans more than they did African Americans. Jackson argues that the Ganda are Westernised and that the nuclear family is characteristic of the Ganda.

Having discussed the high incidence of multiple care-giving amongst African Americans, Jackson states that kin selection and reciprocal altruism undergird African-American care-giving, with parental investment being the norm for white American infant care (1993, p.95).

Jackson states that since attachment relations are themselves unobservable (one can only see the behavioural expressions of attachment), assumptions have to be made as to the meaning of various behaviours. Because the Strange Situation was developed for white middle class Americans, the hypotheses regarding the meaning of behaviour expressed during the separation episodes may be relevant for the white American sample but not necessarily so for other cultures (Jackson, 1993, p.96). Jackson questions two important assumptions of the attachment paradigm - that the infant's exploratory behaviour system is activated by a room full of toys, and that this exploratory behaviour changes as a function of the whereabouts of its attachment figure (1993, p.95).

In her study of African-American infants Jackson found that the infants were simply not perturbed by the setting or by the stranger. Jackson argued that the daily experiences of long separations, and having multiple caregivers predisposed them to be outgoing and yet still attached to their parental figures (1993, p.98). A toy filled room with a friendly stranger would not cause the African-American infants to become unduly upset, with the result that their behaviour systems tilted towards exploration - even at reunion.

In his commentary on Jackson's paper Van IJzendoorn argues that the presence of multiple caregivers does not preclude a special bond between the mother and her infant (1993). Van IJzendoorn quotes Tronick's Efe study that despite multiple care-giving, by the age of twelve months infants had developed a primary attachment to the mother (in the context of sensitive multiple care-giving). Tronick argues that the reason for this is the amount of time that the infant spends alone with the mother at night (quoted by Van IJzendoorn, 1993, p.103).

Van IJzendoorn argues that infants develop a network of attachment relationships and that it is not possible to say which are the 'strongest' since attachment theory can only account for 'quality' of relationship, and not strength. Finally, Van IJzendoorn states that he is far more interested in how multiple attachments are mentally represented (internal working model), and whether these are more decisive for later development than individual infant-caregiving relationships (Van IJzendoorn, 1993, p.105).

Leiderman and Leiderman (1974) in looking at the affective and cognitive consequences of polymatric infant care in the East African highlands, found that the major effect of polymatric care is the enhanced cognitive development of the infant (p.93). Monomatric care is not the norm in most of the world because of social and economic pressure, and there is also limited anthropological evidence for an exclusive infant-mother relationship (Leiderman and Leiderman, 1974).

We can conclude that the monomatric care system may

be sufficient, but it certainly is not necessary for the formation of multiple attachment relationships in the human infant (Leiderman and Leiderman, 1974, p.108).

2.6.2 ASCRIBED MEANINGS

The validity of the Strange Situation in measuring attachment depends to a large degree on the assumptions made about the meaning the various episodes have for the young child and that the experience be psychologically similar for all infants (Tomlinson, 1997). If the experience is somehow dissimilar, in order to ensure that the Strange Situation is a valid and comparable assessment, judgements need to be adjusted to take the dissimilarities into account (Lamb et al, 1985).

For instance, a 'wariness' of strangers is assumed and without it the child's behaviour at separation and reunion would be different. Perhaps more importantly, it is assumed that separation from the mother is experienced as distressing. These questions will be discussed later in terms of the attachment data from the Hanover Park Project.

2.7 ROLE OF INTERVENTION IN MOTHER-INFANT ATTACHMENT

Despite considerable evidence that insecurely attached infants function less well than securely attached infants on a variety of tasks (Erickson, Sroufe, & Egeland, 1985; Lewis, Feiring, McGuffog, & Jaskir, 1983; Matas, Arend, & Sroufe, 1978; Sroufe, 1983; Sroufe, Fox, & Pancake, 1983):

attachment theory has had surprisingly little direct impact on the design and the evaluation of clinical child care, despite the fact that groups of parents and babies who are at risk for developing anxious attachments have been identified

(Van den Boom, 1994, p.1457).

In an attempt to address this deficiency, Van den Boom (1994) undertook what was perhaps the largest intervention study in the attachment field up to that point. Her intervention strategy aimed at improving the ability of the mother to monitor signals from her infant in a more attentive manner, and then to respond appropriately to the signals the mother had accurately perceived.

The intervention is geared toward ameliorating disorders of attachment by focussing on their roots in the mother-child interaction (Van den Boom, 1994, p.1458).

Van den Boom's sample was a well functioning low socio-economic sample, with intervention being of a skills training format and implemented during naturally occurring mother-infant interactions in

the home. From 588 neonatal assessments Van den Boom assigned 50 mother-infant pairs to an experimental group, and 50 pairs to a control group. All 100 dyads received two immediate post-treatment assessments (mother-infant interaction and mother-infant exploration) and a delayed post-treatment assessment (attachment security) (Van den Boom, 1994).

The mothers in the experimental group received three intervention sessions of two hours each when their child was between six and nine months. Van den Boom herself carried out the intervention in all cases. The focus of the intervention was on enhancing maternal sensitive responsiveness, by assisting mothers in adjusting their behaviours to the infant's unique cues. The intervention was aimed at enhancing the mothers sensitivity through input on how to soothe their children, and by encouraging the mothers who had become discouraged, and in some cases given up, to begin playing with their children.

Van den Boom's simple intervention (six hours over a three month period) resulted in sixty eight percent of the children in the experimental group being rated as secure at one year of age, while only twenty eight percent of the control group were rated secure. Maternal responsiveness, stimulation, visual attentiveness and control were effectively improved.¹⁰

The intervention also had the effect of changing infant behaviour.

Intervention promoted substantial
improvement in the quality of mother-infant interaction
and the quality of infant exploration, parameters
indicative of the quality of an attachment relationship

(Van den Boom, 1994, p.1472).

In approaching the question of intervention with anxiously attached children and their decreased competence in social-emotional functioning in toddler-hood, Lieberman, Weston, and Pawl (1991) pose the question as to whether "later developmental correlates of anxious attachment can be prevented through early intervention" (p.199).

Lieberman et al (1991) looked at the effect of infant-parent psychotherapy on improving the quality of the relationship between mother and infant, and argued that theirs is an attempt to integrate the theoretical framework of attachment theory with the clinical contributions of psychotherapy to infant mental health.

¹⁰ All coders and observers were blind to group assignment of the dyads (van den Boom, 1994).

Lieberman et al's (1991) aim was to promote secure attachment through enhancing maternal empathy for the child's needs and affective experience. The sample comprised 100 low socio-economic mothers who had recently immigrated from Mexico or Central America, and were randomly assigned to an intervention group, an anxious control group and a securely attached control group.

The study began when the infants were a year old and continued till shortly after their second birthday. The intervention involved weekly sessions with mother and baby lasting one and a half-hours and took place mostly in the home. Each dyad had the same intervenor for the duration of the study.

The results were that mothers and toddlers in the intervention group had significantly more adaptive scores than the control group. Intervention enhanced maternal empathy and interaction with the child, while decreasing the avoidance, resistance and anger of the child (Lieberman et al, 1991, p.206).

An important finding was that the intervention was not related to significant changes in maternal attitudes. The authors argue that cultural factors may have influenced these findings, in that the scale items tapped strongly held cultural values such as ideas advocating child obedience, the firm suppression of child aggression and the primacy of parental authority in raising children (Lieberman et al, 1991).

The authors conclude by stating that the study is a hypothesis testing and exploratory one. They add however, that what it does suggest is that the second year of life is a "ripe period for the clinical application of attachment theory and research" (Lieberman et al, 1991, p.208).

Lojkasek, Cohen, & Muir (1994) outline four models of intervention that aim to influence the caregiver-infant relationship directly or indirectly. The four are support, guidance, psychotherapy, and infant-led psychotherapy. In their introduction Lojkasek et al state that a critical element in planning any intervention is an understanding that the infant is an active participant in the forming of an attachment relationship.

Supportive interventions are rooted in nursing and social work, and involve assisting mothers in accessing community resources, support through counselling and participation in self-help groups. This form of intervention usually takes place in conjunction with other approaches and as such is

difficult to evaluate. Booth et al (1987) found improvements in the mother-infant relationship when mothers were assisted in accessing community resources.

There are two types of guidance models - developmental guidance and relational guidance. *Developmental guidance* focuses on increasing the mother's knowledge about her infant, its needs and milestones. *Relational guidance* helps mothers to increase their knowledge and experience of their infant in context of spontaneous interactions (Lojkasek et al, 1994). The authors state that while attachment theory did not explicitly form the basis of these interventions, significant improvements have been demonstrated in the quality of the mother-infant relationships, cognitive functioning, normalised developmental expectations, improved parenting skills and increased father involvement.

The third method of intervention is psychotherapy, usually conducted alone with the mother or sometimes with the infant present - the focus however, is on the mother. Lojkasek et al (1994) state that evaluative research is relatively recent. Cramer et al (1990) compared psychotherapy with relational guidance and found that both were effective in enhancing the mother-infant relationship (quoted by Lojkasek et al, 1994).

The final mode of intervention the authors discuss is infant-led psychotherapy, which involves spontaneous and undirected activity of the infant, which the mother acknowledges and responds to. The intervention involves the mother getting down on the floor with her infant, to observe the child and to follow the infant's lead with the therapist acting as intermediary. Lojkasek et al argue that this approach is most congruent with attachment theory (1994, p.214).

Anisfield et al (1990) designed their study to test the hypothesis that increased physical contact, experimentally induced, would promote greater maternal responsiveness and more secure attachment between mother and infant (p.1617). Low SES mothers of new-born infants were assigned to an experimental and a control group, and it was demonstrated at three and a half months that mothers in the experimental group were more responsive to their babies' vocalisations. At thirteen months significantly more experimental than control infants were securely attached to their mothers. Anisfield et al (1990) concludes that their study indicates a causal relation between physical contact and security of attachment between mother and infant within their sample of low-SES dyads (p.1625).

Lyons-Ruth et al (1990) studied infants at high risk due to poverty, maternal depression, and caretaking inadequacy. Thirty-one infants were assigned to weekly home visiting services. At the age of 18 months, visited infants were compared with 2 groups of socio-economically similar unserved infants on a variety of measures of infant attachment and mother-infant interaction. Infants

who had home visits were twice as likely to be securely attached, with unserved high-risk infants showing a high rate of insecure-disorganised attachments. Duration of services was positively correlated with maternal involvement at 12 months (Lyons-Ruth et al, 1990, p.85). Intervention effects were more consistently demonstrated with infants of depressed mothers. The authors conclude that this was primarily because the untreated infants of depressed mothers did so poorly.

Jacobson and Frye (1991) evaluated the influence of maternal social support on the development of attachment. Volunteer coaches, trained to provide maternal support and information, met with mothers from the experimental group prenatally and during the first postpartum year. The coach talked to the mother about her expectation of the baby, about her fears and also about developmental milestones. At 14 months, experimental infants scored higher on an Attachment Ratings cluster Q sort, and they also appeared to be more secure on the Summary Attachment Ratings scale.

Van IJzendoorn et al (1995) reviewed 16 studies on the effectiveness of preventive or therapeutic interventions aimed at enhancing parental sensitivity and children's attachment security in the infant-mother relationship. From their narrative review and meta-analysis of the sixteen studies Van IJzendoorn et al conclude that interventions are effective in enhancing the mother's sensitivity to the attachment cues of her infant as well as the quality of the attachment relationship, although the size of the effect is small. Furthermore, short-term interventions appear to be more effective than long-term ones (Van IJzendoorn et al, 1995, p.244).

Lyons-Ruth, Zoll, Connell, & Odom (1987) found significant intervention effects on attachment related measures, while Blignault, Holmes, Payne, & Parker (1987); and Booth, Mitchell, Barnard, Spieker, and Magyary (1987) did not show significant intervention effects on attachment classifications.

Meij (1992; Quoted by Van IJzendoorn et al, 1995) studied the effect of a intervention programme in a sample of 78 lower-class families. With reference to quality of attachment it was found that neither at the age of 12 months or 18 months were the intervention programmes effective.

Juffer (1993; Quoted by Van IJzendoorn; 1995) implemented two types of interventions aimed at enhancing parent's sensitivity and infant's attachment security with a group of Dutch adoptive families with the infants coming from Sri Lanka and South Korea. The first intervention consisted of written information, while the second type combined written information with three visits of video home trainers who gave feedback on the mother-infant interactions, which had been video taped at home.

Although 70% of the control group infants were securely attached there was a significant increase of securely attached infants (90%) in the intensive experimental group which received the video feedback. The intervention was also effective in enhancing maternal sensitivity as measured with the Ainsworth sensitivity and co-operation scales (Van IJzendoorn et al, 1995, p.236).

From one article being published on attachment between 1950 and 1968, to 4152 works between the years of 1986 and 1997, attachment theory rose “like Rip Van Winkle, from its 30-year slumber” (Franzblau, 1999a, p.5). The above discussion has not attempted to be comprehensive, but rather provides a broad framework in order to situate the results of the Hanover Park Project. The next chapter will outline in more detail the aims, methodology and assessment instruments used in the Hanover Park Project.

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CHAPTER THREE - HANOVER PARK PROJECT

The aim of the Hanover Park Project was (through the implementation of community based mother-infant intervention) to reduce the incidence of child abuse and neglect in a small sample of at risk mothers and to promote nurturing parent-child relationships.

3.1 METHODOLOGY

3.1.1 SUBJECTS

The subject population consisted of 50 mothers and their infants gathered from clinic files at the Hanover Park Mid Obstetric Unit (MOU). During the course of the project under review, nine of the original 50 mothers (four of the control group and five of the intervention group) fell out for reasons such as falling ill, non-compliance and moving residence.

Prospective files were evaluated prior to the birth of the child using the Family Stress Checklist (see discussion of this checklist and the criteria used by the Hawaii Department of Health in their Healthy Start Programme in Chapter 3.2.1). Families were assessed and chosen based on levels of stress, with the twenty-five highest stressed families being chosen for the intervention group.

3.1.1.1 RECRUITMENT AND THE MEDICAL RESEARCH COUNCIL

In the initial development of the project, financial constraints dictated that only an intervention group was to be recruited.¹¹ Twenty-five mothers were therefore recruited to be members of the intervention cohort, and began being visited by the community workers. Subsequently, funding was secured from the Medical Research Council with the stipulation that a control group be recruited. The same files were then retrospectively analysed (once again using the Family Stress Checklist) and twenty-five subjects were placed within the control group. Subjects were also matched based on marital status, number of children and employment status.

The control group received only the normal services available in the community, as well as the monitoring of the babies' developmental progress and referrals of any difficulties that became apparent in the two-year course of the project (Landman, 1995).

3.1.2 INTERVENTION

The Hanover Park Project replicated the critical elements of the Healthy Start Programme as developed in Hawaii and later replicated throughout the United States as 'Healthy Families America' (Landman, 1995). An in-depth discussion of this and other intervention programmes is not within the scope of this study.

¹¹ Landman, 1999 – Personal communication.

In summary, the core service is a long term one with a focus on supporting parents and the parent-child relationship, as well a stress upon the health of the child and linkages to the health care system (Landman, 1995). The role of the community worker is broad and includes skills such as empathic listening, information sharing, advocating on behalf of the mother/parents if necessary, teaching skills (such as how to manage aggression in children), maintaining confidentiality and being sensitive to the feelings and roles of other family members (Landman, 1995).

The first visit by the community health workers in order to begin the intervention only took place once the child had been born (in the first week postpartum). Mothers in the intervention group were offered weekly home visits for a period of two years following the birth of their babies.

3.1.2.1 FAMILY SUPPORT WORKERS

The Family Support Workers all lived in Hanover Park and were chosen on the basis of having had children of their own, being empathic, non-judgemental, respectful and willing to commit themselves to the project for a period of two years (Landman, 1995). Training was initially largely experiential, but then developed into providing information about child development, breastfeeding and the common concerns of parents. Basic communication and counselling skills were also taught (Landman, 1995).

3.2 ASSESSMENTS

A basic demographic questionnaire was administered at two months post-partum, together with the Edinburgh Postnatal Depression Scale (Cox, 1986). Anthropometric data (weight, length and head circumference) was collected at the end of year 1 and at the end of year 2.

The Griffiths Scales of Mental Development were administered at age two. The Strange Situation procedure was administered when infants were 24 months old.¹²

3.2.1 FAMILY STRESS CHECKLIST

In 1975 the Hawaii Family Stress Centre (HFSC) initiated a hospital based project aimed at the early identification and intervention with families of new-born infants who were at risk for child abuse and neglect. (Hawaii Family Stress Centre, 1991) An important element of this project was the utilisation (using proactive case-finding) of the Family Stress Checklist which had been developed and researched in Denver in 1972 and formally validated by Orkow, Murphy and Nicola in 1985. The

¹² The Strange Situation was not administered at 18 months of age as is recommended (Ainsworth, 1978; see Chapter 4.2.2 for the implications of this) for logistical reasons (Landman, personal communication).

checklist consists of ten questions graded on a continuum of 0 to 10.¹³ (See Appendix 4 for a copy of the checklist.)

The aim of the Family Stress Checklist is to systematically identify families at risk and therefore focus services upon families who are most in need. Further, an attempt is made to implement the intervention in a manner which is cost effective and allows allocation of scarce resources rather than attempting to service all new families (Healthy Start: Hawaii Department of Health, 1991). The program has several important goals, which include “improved family functioning, promotion of positive parenting and parent-child interaction, prevention of child abuse and neglect, and the promotion of positive child development” (Healthy Start: Hawaii Department of Health, 1991, p.1).

3.2.2 ASSESSMENT INSTRUMENTS

3.2.2.1 STRANGE SITUATION

As has already been discussed in Chapter 2.4.1 the Strange Situation involves a series of episodes involving successive separations and reunions, which are then coded. Lamb (1985) states that the original aim of the Strange Situation was to assess how infants used adults as ‘secure bases’ from which to explore the world, how they reacted to strangers and finally their response to separation and reunion.

An important philosophical element (a basic assumption) of the procedure is that the least stressful episodes occur first and that the level of stress, which the infant is experiencing, increases during the course of the eight episodes (Ainsworth et al, 1978). This is in line with Bowlby’s ethological model which serves to ensure proximity to the mother in the face of danger (Bowlby, 1969). Importantly, even though episodes become more stressful, the secure base function of attachment will only work effectively if ‘mild stress’ is experienced (Takahashi, 1990).

A further important assumption is that the infant must have the locomotor and cognitive competence to recognise the novelty of the situation (Waters, 1999). Similarly, the infant must be able to recognise the absence of the mother and activate secure base behaviour during reunions (Waters, 1999).

¹³ In the Family Stress Checklist used in the Hanover Park study, question 3, which involved assessing whether a parent has been suspected of child abuse in the past, was omitted. According to Landman (personal communication) this was because there were no records and in her experience parental accounts were unreliable.

3.2.2.2 THE STRANGE SITUATION ROOM AND ITS CONTENTS

The Strange Situation is administered in two adjoining rooms. The physical arrangements of the room and its contents should ideally remain constant in order to militate against differences in context accounting for differences between infants undergoing the procedure.

The rooms are separated by a one way mirror. Episodes are filmed from behind the one way mirror for later coding. Facing the mirror are two chairs (one for the stranger and one for the mother). Between the two chairs, on the floor is a pile of toys for the infant to play with. (See Appendix 5 for a diagram of the room layout). Toys included cuddly toys and dolls, blocks, a number of balls, a small doll's house and a variety of cars and planes (the toys remained constant for all subjects).

3.2.2.3 EPISODES OF THE STRANGE SITUATION¹⁴

EPISODE 1: MOTHER, BABY, AND EXPERIMENTER

This is an introductory episode usually lasting less than thirty seconds where the mother and the infant are introduced to the room by the experimenter. The mother carries her infant into the room, and is instructed where to sit and where to put her infant once the experimenter has left the room.

The observer would note how the child responds to the new situation, either from his mother's arms or from within close proximity to her.

EPISODE 2: MOTHER AND BABY

Having placed her infant on the floor with the toys, the mother sits on the chair and either reads or pretends to read a magazine. She is instructed that she is to leave her child to explore the room and the toys and only to respond or to intervene if her child attempts to engage her.

Important information is gathered in this episode about the nature of the child's' exploration of the strange situation – locomotor, manipulatory and visual.

EPISODE 3: STRANGER, MOTHER AND BABY

In this episode a stranger enters the room and sits on the second chair. She may greet the mother and baby initially, but then remains silent for one minute. Following a pre-arranged knock on the one way mirror the stranger engages the mother in conversation for the second minute. The final minute of the episode involves the stranger-initiating interaction with the child. At the end of the episode the mother leaves the room as unobtrusively as possible (Ainsworth et al, 1978).

¹⁴ I will follow Ainsworth et al's description of the episodes (1978).

The observer is interested here in the orientation of the child towards the stranger in comparison to the mother, and how the child reacts to the stranger attempting to interact with him.

EPISODE 4: STRANGER AND BABY

Upon the departure of the mother the stranger will attempt to reduce interaction with the child and return to her chair. If the child attempts to interact with the stranger then she will respond. If the child is distressed at the departure of its mother then the stranger will attempt to comfort the child through either picking him up or by trying to distract him with a toy. If she is successful in comforting the child, then she will return him to the floor and toys and return to her chair. If the child becomes too distressed then the episode will be curtailed and the mother will return to the room prior to the full completion of the three minutes.

Important behaviour, which is being observed in this episode, is the level of distress exhibited by the child and very importantly the nature of the interaction with the stranger. To what extent does the child accept being comforted by the stranger. Does he cling, or does he reject the advances of the stranger are also important variables to consider.

EPISODE 5: MOTHER AND BABY

In episode 5 the mother will stand outside and call out her child's name just before entering. This is important in that it serves to orient the child to the imminent return of his mother and in so doing turn his attention from the stranger or simply allow him to momentarily prepare for her return so as not to be surprised at her re-appearance. The mother will then either comfort her distressed child or simply make contact and then return him to the toys. The stranger will leave the room as unobtrusively as possible. After three minutes the mother will once more leave the room, now leaving her child on his own.

In this episode the observation is focussed on the nature of the interaction between mother and child upon reunion, and also on the resulting interactions within the episode.¹⁵

EPISODE 6: BABY ALONE

Once again three minutes are allowed in this episode and the observer is interested in how the child reacts to his mother's departure - the extent to which he child may settle and return to exploration or

¹⁵ It is important to stress that in terms of the coding of attachment status it is only the two reunion episodes between mother and child (episodes 5 and 8) which are coded. Other information such as the nature of play, exploration and interaction with the stranger is taken into account but it is only the reunion episodes which are directly coded.

be too distressed to continue exploration. Once again, as was the case in episode 4 if the child becomes too distressed the episode is curtailed.

EPISODE 7: STRANGER AND BABY

The beginning of episode 7 marks the entry of the stranger first rather than the mother as may be expected (even if the child is highly distressed). If the child is distressed, the stranger will attempt to comfort him and, if successful, return him to the toys. If the child wishes to engage with the stranger after having been soothed, the stranger will respond appropriately. If the child is highly distressed and the stranger is unable to soothe him, then this episode may also be curtailed. This will be done less quickly however, in that the infant is no longer alone in the room.

The observer is interested here in how the child interacts with the stranger – can the stranger soothe the child and how does his behaviour with the stranger compare with his reunion behaviour with his mother?

EPISODE 8: MOTHER AND BABY

The mother enters the room and stands at the door giving the child a chance to respond. As in the case of episode 5, the stranger leaves as unobtrusively as possible.

The most important behaviour which is being observed in this episode, is reunion behaviour – the extent to which the infant is either soothed by the mother, is not able to be soothed or avoids the mother's overtures upon reunion.

TABLE 3.1 SUMMARY OF EPISODES OF STRANGE SITUATION

EPISODE	IN ROOM	DURATION	EVENTS AND PROCEDURES
1.	M,B	Approx 1 minute	M and B are introduced into the S/S room by E. If necessary, M interests B in toys before being seated. M does not initiate interaction but is responsive to bids from B.
2.	M,B	3 minutes	M remains seated and is responsive to bids for interaction but does not initiate.
3.	M,B S	3 minutes	S enters and is seated; sits silently for 1 minute; talks to M for 1 minute; engages B in interaction and/or toy play for 1 minute.
4.	B,S	3minutes (less if B is extremely distressed)	M leaves room, S allows B to play alone but remains responsive to interactive bids. If B is crying, S offers contact and tries to comfort. If B refuses or resists, S does not persist. Terminate episode after 1 minute hard crying or on M's request.
5.	M,B	3 minutes	M calls B from outside door and steps inside, pausing at doorway to greet B and to reach and offer contact. If necessary, B is held and comforted and then reinterested in the toys; otherwise, M is seated and remains responsive to bids from B but does not initiate.
6.	B	3minutes (less if B is extremely distressed)	M leaves room; B remains alone. Terminate episode if 1 minute of hard crying ensues or on M's request.
7.	B,S	3minutes (less if B is extremely distressed)	S returns and is seated. If B is crying or begins to cry without pause, S offers contact and tries to comfort. If B cannot be comforted and crying continues (or on M's request), terminate episode.
8.	M,B	3 minutes	M calls B from outside door and steps inside, pausing in the doorway to greet B and to reach and offer contact. B is held and comforted and then reinterested in toys; otherwise M is seated and remains responsive to bids from B but does not initiate if B is content in toy play.

M = mother; B = baby; S = stranger; S/S = strange situation; E = Examiner. Source: Waters (1978).

3.2.2.4 SCORING OF INTERACTIVE BEHAVIOUR

Ainsworth's early attempts at classification (Ainsworth and Wittig, 1969) concentrated on the infant's behaviour during separation. Emphasis was placed on exploratory locomotion, exploratory manipulation, visual exploration, visual orientation, smiling, vocalisation, oral behaviour and particularly distress (crying) associated with the absence of the caregiver. Subsequently however, reunion episodes were perceived to be more significant and it was the coding of reunion behaviour, which has come to determine what is coded (Ainsworth et al, 1978).

In Ainsworth's original schema, four dimensions of behaviour were outlined which became crucial in distinguishing the three classificatory groups and subgroups. The four dimensions are: proximity and contact seeking behaviour, contact maintaining behaviour, avoidance and resistance. A seven-point scale was developed for each of the dimensions. For instance in the case of proximity and contact seeking, behaviour was defined in terms of the degree of effort and initiative implicit in the behaviour with the infant scoring 7 when the most initiative was displayed, where there was no delay and where the infant did not need to be invited over to the caregiver.

On the other hand a score of 1 is given where there seems to be no effort in initiating contact and where the infant provides no signal which may imply an invitation for the caregiver to go over to him. Similarly, for the other dimensions, behaviour is coded on a sliding seven-point scale. (See Appendix 6 for a detailed outline of the Scoring System for Interactive Behaviours.)

Infants in the Hanover Park study were assessed at 24 months of age. While Lamb (1985) states that the procedure is appropriate for infants from 12 to 24 months of age, Sroufe¹⁶ has questioned its use at this age given the infants' more developed communication abilities.

3.2.3 EDINBURGH POSTNATAL DEPRESSION SCALE

Cox developed the Edinburgh Postnatal Depression Scale (EPDS) in 1986 with the aim of producing a scale to identify postnatal depression in the community, which would be simple to complete, and be acceptable to mothers themselves, as well as to professional health workers (Cox, J, 1986). The EPDS consists of a 10-item self report scale to screen for postnatal depression. Responses are then graded on a four-point scale according to severity and duration (See Appendix 7).

The validation study of the 10-item EPDS was carried out on 84 mothers living in Edinburgh. Administration took place in the homes of the mothers as Cox (1987) argued that health visits were seen to be an important link between the assessment of puerperal mothers and the primary health care

¹⁶ Personal communication (1996).

team (p.783). The Research Diagnostic Criteria (RDC) of Spitzer et al (quoted by Cox, 1987) was used to diagnose depressive illness. Validation of the 10-item EPDS was then determined by comparing the EPDS scores with the RDC clinical diagnosis of depression.

According to Cox (1987) the EPDS was found to have satisfactory validity, split-half reliability and was also sensitive to changes in the severity of the depression over time (p.784). Cox goes on to argue that an added advantage of the device is that the validation study was carried out in the community, and will thus be useful in the routine work of community health workers, health visitors and midwives.

3.2.4 GRIFFITHS SCALES OF MENTAL DEVELOPMENT

The Griffiths Scales of Mental Development were developed in Great Britain by Griffiths (1984), and arose out of naturalistic observations of children at home, in playgrounds, on public transport and while engaged in everyday activities such as walking, talking and playing. The scales were developed for children from birth to the age of eight. There are five scales in the test which allow for the assessment of locomotor development (Scale A), personal-social development (Scale B), hearing and speech (Scale C), hand and eye co-ordination (Scale D), and performance (Scale E).

The scales are a comprehensive test of development, and have been used in countries such as Canada, Columbia, Lebanon, Germany and South Africa. Allan, Luiz & Foxcroft (1992) cite numerous studies suggesting the usefulness of the scales in assessing children in the South African context. Interestingly, Allan et al (1992) found that while item bias may hinder a national multicultural standardisation of the Griffiths Scales in South Africa, they found the British norms to be more applicable for South African black and coloured children than they were for Indian and white children.

Chapter 4 and Chapter 5 will present the results of the Hanover Park Project. Findings from outcome measures employed were all non-significant. However, as will be seen, results of the Strange Situation did indicate a trend. In the light of this, Chapter 4 will present the findings from the Strange Situation and discuss the implications for issues raised about culture and attachment and also for the use of the Strange Situation in South Africa. Chapter 5 will then present the remaining findings of the Hanover Park Project.

CHAPTER FOUR - ATTACHMENT FINDINGS IN HANOVER PARK STUDY

4.1 ATTACHMENT RESULTS

4.1.1 PROVISIONAL ATTACHMENT CLASSIFICATIONS

One of the principal aims of this dissertation is to note any anomalies or behaviours outside the norm (Ainsworth's original Baltimore findings [1978]) which may be indicative of cultural variation.

In the initial coding of the Strange Situation¹⁷ certain anomalous findings began to emerge, which made final classification difficult. A number of infants (N=3 in the control group and N=3 in the intervention group) met all the criteria for a classification within the secure category but for their proximity seeking behaviour. These infants did not readily seek contact with their mother upon reunion, and in fact displayed aspects of avoidant behaviour. As a result of this anomalous behaviour, classification into the secure category was not automatic, and given that all the other criteria for a secure classification had been met, classification into the avoidant category was also not possible. The present researcher therefore created a provisional category entitled 'atypical'¹⁸ into which these anomalous findings were placed (see Table 4.1).

TABLE 4.1: List of Provisional Attachment Classifications

GROUP	AVOIDANT	SECURE	RESISTANT	ATYPICAL
INTERVENTION	4	10	3	3
CONTROL	8	6	4	3

Woolgar¹⁹ described this anomalous proximity seeking as to be expected given the age of the children. Cassidy and Marvin²⁰ set out to establish the nature of the attachment behaviours of older children (1992)²¹. Cassidy and Marvin argue that each individual has his own 'strategy'²² and that there is

¹⁷ I coded the Strange Situation videos.

¹⁸ The term 'atypical' is used here to indicate initial difficulties in classification based exclusively on proximity seeking behaviour and should not be confused with the atypical designation as used by Waters (1999).

¹⁹ Personal communication (1998).

²⁰ The Attachment Working Group of the John D. and Catherine T. MacArthur Network on the Transition from Infancy to Early Childhood.

²¹ Ainsworth's original sample was with 18-month-old children (1978).

²² This refers to the attempt to maintain a particular attachment organisation by the individual (Cassidy, J & Marvin, R.S et al, 1992).

support for the notion that such strategies underlie the three basic attachment patterns of both infants, older children (5-7 years) and even adults. They go on to argue that “of course, the specific behaviours associated with these attachment patterns vary greatly across developmental levels, but the underlying organisation remains quite similar” (author’s emphasis, Cassidy & Marvin, 1992, p.7).

In the light of this, those ‘atypical’ attachment classifications were re-classified as secure, thus taking this issue into account. Table 4.2 presents the final attachment classifications.

While the explanation for this perhaps goes to age, it is important to remember what possible implications it may also have in terms of culture and assigned meanings, issues which will be discussed in Chapter 4.2.

4.1.2 FINAL ATTACHMENT CLASSIFICATIONS

TABLE 4.2: Chi-square results for Final Attachment Classifications

GROUP	N	AVOIDANT	SECURE	RESISTANT	ROW TOTAL	% TOTAL
INTERVENTION	20	4	13	3	20	48.8
CONTROL	21	8	9	4	21	51.2
COLUMN TOTAL		12	22	7		
% TOTAL		29.3	53.7	17.1		100

<i>CHI-SQUARE (χ^2)</i>	<i>VALUE</i>	<i>DF</i>	<i>SIGNIFICANCE</i>
Pearson	2.18037	2	.33615
Likelihood association	2.20948	2	.33130
Linear-by-linear association	0.43969	1	.50727
Minimum expected frequency:	3.415		
Cells with expected frequency<5:	2 of 6 (33.3%)		

The above statistical results are calculated on the basis of a three way coding both for intervention and control group (i.e avoidant, secure, resistant). Chi-square (χ^2) analysis indicates no significant difference ($p < .33615$) between intervention and control group.

TABLE 4.3: Two-way chi-square

GROUP	SECURE	NOT SECURE
INTERVENTION	13	7
CONTROL	9	12

<i>CHI-SQUARE</i>	<i>VALUE</i>	<i>DF</i>	<i>SIGNIFICANCE</i>
Pearson	2.01987	1	.15525
Continuity correction	1.22754	1	.26789
Likelihood ratio	2.03835	1	.15338
Linear-by-linear association	1.97061	1	.16038

The above statistical results are calculated on the basis of a two-way coding, in an attempt to see whether this might produce significance. Chi-square analysis indicates no significant difference ($p < .15525$).

A logistic regression²³ (group, gender and group*gender effects modelled²⁴) was then used to assess whether there was a group gender interaction. This was done in order to test whether the intervention was more useful for boys or if the girls ended up worse without the intervention (or vice-versa). Results here also showed a non-significant effect ($\chi^2=3.81$; $df=3$; $p=.28$; ns).

4.1.2.1 POWER ANALYSIS

As will be discussed in Chapter 5 (analysis of the outcome measures other than attachment) effects of intervention on outcome are all non-significant. Given this non-significance, arguing for a power analysis on that data would be of little use. However, given that a trend was evident (although not significant) in the Strange Situation findings a power analysis was conducted.

As mentioned above, in an attempt to give extra power²⁵ to the statistical analysis the three way coding was reduced to a binary measure (i.e. secure vs not secure). Here a minority of the control group are secure (9/21, 42.9%) while a majority of the intervention group are secure (13/20, 65%), with a non-significant chi-square (2.02; $df=1$; $N=41$; $p=.16$, ns). This is an improvement of 22.1%, half as many again (there is a natural base rate in the control group of 43%, half of this is 21.5%,

²³ Logistic regressions report significance distributed as 'chi-square' but they are not 'chi-squares' which is a specific test of independence between non-ordered categorical variables. Thus one tests whether group and security are independent of each other in a 2x2 chi-square, but the logistic regression reports significance as a change in the chi-square statistic.

²⁴ In the light of N this would have low power.

²⁵ "To increase the power of a study, we ... obtain data that has minimum variability between groups, large differences between the groups, and a sufficiently large N (Heiman, 1995, p.92).

which added together gives 65.5%, very close to that of the intervention group). On the basis of this the requisite N's for a base rate of 40% and improvements of one-third to one-half can be worked out.

Having established an effect size, an algorithm²⁶ was applied, with 'power' set at 85% and the base rate set at 40%. The results of the algorithm were that for an improvement of one-third, one would need a sample size of 148 (74 in each group), and for an improvement of one-half, a sample size of 340 would be needed (170 in each group).

4.2 DISCUSSION OF ATTACHMENT RESULTS

4.2.1 STRANGE SITUATION RESULTS

With regard to the attachment findings, one of the aims of this dissertation was to assess the impact of the intervention programme on attachment classification. Its second aim was to assess the extent to which Strange Situation classifications in the Hanover Park community are similar to proportions found elsewhere, and in so doing, discuss questions around attachment and culture as measured by the Strange Situation.

Results indicate that there is no significant difference between the control and intervention groups, although, as discussed in the above section, a power analysis suggests that with a larger sample size (and assuming that the observed trend was to continue) significance may have been achieved.

There are two problematic issues in attempting to account for the differences. Firstly, there are methodological difficulties in the Hanover Park Project (which will be discussed later in this study) which preclude any categorical statements about the results. Secondly, as has already been stated, one of the main aims of the study was to improve the mother-child relationship and in so doing assess the usefulness of the intervention in preventing child abuse and neglect. However, in this study, without other assessment measures such as those measuring maternal sensitivity or mother-infant interaction, any attempt to link differences between the two groups solely to the intervention process itself is problematic.²⁷ One possibility is that the intervention subjects may have shown improvement simply as a result of the increased attention they received (van den Boom, 1994, p.1473).

²⁶ The algorithm relates N, power and effect size together with sample characteristics of the mean and the base rate.

²⁷ See Chapter 6.2.5 for a discussion of the need for more comprehensive assessment of the mother-infant relationship.

The proportion of secure vs. insecure attachment (in the intervention group) is comparable to the global distributions (Ainsworth et al, 1978; Van IJzendoorn & Kroonenberg, 1988; Van IJzendoorn et al., 1992). The same is not true for the control group where there were a large number of avoidant infants (although not significantly so).

4.2.2 INFANT AGE AT POINT OF STRANGE SITUATION ASSESSMENT

The Strange Situation was designed for use with infants between the age of one year and eighteen months (Ainsworth et al, 1978). As has already been stated, infants in the Hanover Park Project were assessed at 24 months. This question of infant age at point of assessment raises important methodological questions, as well as pointing to potential debates about attachment and culture, and infant development.

Ainsworth (1982) in describing Strange Situation behaviour, touched on the methodological question of administering the procedure with infants older than eighteen months when she stated

Upon reunion the two-year-old may be content with mere proximity to his mother rather than requiring the close bodily contact a one-year-old seeks, and later is likely to be content merely with re-establishing interaction with her from a distance (p.10).

Ainsworth et al (1978) concede that there are 'substantial changes' in Strange Situation behaviour from age 2 to ages 3 and 4, but quote Marvin who found that 2 year olds could be classified without difficulty in accordance with her classificatory system (p.215).

Radke-Yarrow et al (1985) following their own studies of age changes in attachment behaviour argue that they expected 2-3 year olds to show less proximity seeking and contact maintaining, but comparable levels of avoidance and resistance (p.887). This was borne out in the findings of the Hanover Park Project.

Waters (1999) argues that Ainsworth's Strange Situation remains valid for infants up to 28 months of age quoting research by Bosso, Corter and Abramovitch into Strange Situation Classifications and Q-sort observations of secure base behaviour at home in a sample of 18-32 month-olds. Cassidy and Marvin (1992) cite extensive literature on reunion and separation behaviour in developing their adapted coding manual and procedure for children between the age of two and a half and four and a half.

Other researchers such as Adiyanti (quoted by Zevalkink, 1999) faced with similar questions, focussed on behaviour during episodes in order to support their contention that the Strange Situation could be used with older infants. Adiyanti argued that the amount of distress displayed by infants during the procedure and the level of physical focus upon the mothers would suggest support for the validity of the Strange Situation (quoted by Zevalkink, 1999).

In a similar vein, Sroufe²⁸ argues that many older infants may walk towards the door and attempt to leave the room. In a younger infant this would be coded as avoidant, but in infants 20 months and older this might be seen as an attempt to take the mother from the room, and should not too rapidly be seen as avoidant behaviour.

In accounting for the 'atypical proximity-seeking behaviour' in the Hanover Park study (see Chapter 4.1.1) I am making two hypotheses. In the first I am arguing that this atypical behaviour may be accounted for in terms of their relatively older age, much as has been done by previous researchers in the above discussion. It is important to state that there may be alternative possibilities, which may be missed through concentrating solely on the methodological question.

Following Connell and Goldsmith (1982), I would argue that one would need to assess what they refer to as the 'infant's primary appraisal of the contextual shift'. Sagi et al (1991) argued that it is not clear whether the procedure "indeed creates, at the procedure's beginning, the same experiences of novelty and mild stress for infants in different cultures" (p.588). Accordingly, how different infants (in terms of age and culture) might evaluate the change in the environment and the possible consequences this might hold for them is of great importance. Different appraisals of the mothers' departure from the room will result in different responding behaviours. This points to the importance of not only considering the actual attachment classifications, but also to hypothesising and then finding the means to assess the myriad of potential cultural issues.

4.3 ATTACHMENT/STRANGE SITUATION: METHODOLOGICAL AND CULTURAL ISSUES

Grossman and Grossman (1990) argue that in cross-cultural attachment research three essential questions must be addressed. Firstly, are the methodological foundations of attachment theory suitable for cross-cultural research? Secondly, is the Strange Situation the correct method for measuring quality of attachment? Finally, are long-range implications for individuals of different care-taking histories comparable across cultures?

²⁸ Personal communication.

In the Hanover Park Project, as has already been stated, the proportion of secure vs. insecure attachment (in the intervention group) is comparable to global distributions. This would suggest (bearing in mind the methodological shortcomings of this study) that, unlike in other cross-cultural studies, proportions are similar to those found by Ainsworth et al (1978).

The question as to whether the Strange Situation is the correct method for assessing attachment quality is an ongoing one. In attempting to answer this, Grossman and Grossman (1990) present the findings from Japan and Israel and conclude there is no reason to doubt the cross cultural validity of the Strange Situation (1990). While this may be the case, two important questions are omitted in such an argument.

Firstly, claiming the cross-cultural validity of the Strange Situation does not solve the question as to whether the procedure actually measures quality of attachment. Despite a great deal of evidence which points both to the validity (descriptive and predictive) of the instrument, important questions remain. While an in-depth discussion of this is not within the scope of this study, it is worth making note of work by Belsky et al (1996). They found stability figures, which hovered around 50% (p.923). Belsky et al go so far as to state

to the extent the instability proves inexplicable, questions will be raised about the reliability of the attachment construct as assessed by the Strange Situation (1996, p. 924).

It is not the concept of attachment that is being questioned, but rather the extent to which the Strange Situation is a sensitive index of the security of attachment (Howrigan, 1988, p.118). It is possible, as is argued by Takahashi (1990), in attempting to account for variations in Strange Situation classification amongst Japanese infants who were highly stressed by the procedure, that the Strange Situation measured the ability of Japanese infants to cope with stress rather than attachment itself (p.29). In addition I would argue, following Grossman and Escher-Graub (Quoted by Sagi, 1990) that sole reliance on the Strange Situation “procedure in the study of attachment represents too narrow an approach to the issue” (Sagi, 1990, p.11).

With regard to answering the second question as to whether the Strange Situation is in fact the correct method for measuring quality of attachment (and this goes to the question raised above),

the establishment of reliable means for classifying the organisation of attachment behaviour in a laboratory setting cannot, of course, speak to the theoretical assumption that

such classifications reflect the history of the child's attachment experiences with the attachment figure.

The validity of this basic assumption can only be examined in subsequent studies of the relation between 'real life' events and the pattern established via the classification

(Cassidy and Marvin, 1992, p.9).

The Hanover Park Study is unable to answer the question as to whether the Strange Situation is the correct means by which to measure attachment, nor can it adequately provide clues to the impact of different care-taking histories. Without naturalistic observations (such as the HOME,²⁹ Caldwell and Bradley, 1984), measures such as the CARE index which uses a 3 minute videotaped semi-structured play interaction as the basis for categorising maternal and infant patterns of interaction (quoted by Crittenden, 1988), data about mother-infant interaction during breastfeeding or ethnographic information, little can be inferred about the 'real life' of the infants in the study and their attachment classification. Crittenden (1988) argues that because the Strange Situation is so easily administered, there is a paucity of research linking these results and the infants' behaviour with direct observations in the home (which is in fact exactly where Ainsworth et al [1978] did much of the original research).

Without naturalistic home and context observations, one is limited in terms of later conclusions that can be drawn. For instance, one of the assumptions of the Strange Situation is that the infant is sufficiently afraid/fearful of both the situation and the stranger so as to ensure that he uses his mother as a secure base from which to explore the room and its contents. Hanover Park is characterised to a large extent by high-density council flat living. It could be hypothesised that the infant's continual exposure to strangers may make them impervious to the stranger stress of the Strange Situation.

A further hypothesis goes to the potential influence of separation anxiety. Given that the Strange Situation is administered traditionally at 18 months of age, it could be argued that if there are cultural variations in the onset and duration of separation anxiety, that this might affect behaviour in the Strange Situation. An in-depth discussion is not within the scope of this dissertation, but Kagan et al (1978; as quoted by Krantz, 1994) present findings which illustrate variations in the onset and duration of separation anxiety (see Appendix 9 for table indicating examples of such variations).

Finally, Zevalkink et al (1999) in a study which Hinde (1998) refers to as providing "a model for cross-cultural developmental research on parenting", make an important connection between resistant

²⁹ The HOME (1984) is not without its own difficulties – see Appendix 10 for a brief discussion of some of these problems.

behaviour as measured by the Strange Situation, 'dangerousness' in the home situation (mud floor and open kitchen fire) and consequent 'physical closeness' between infant and mother. They argue that the 'physical closeness' made the mothers appear more competent when assessed in home situation, but on other measures such as providing preventive health care and in the Strange Situation they were less than competent (Zevalkink, 1999, p.36).

4.3.1 A SHIFT OF FOCUS

I have discussed a number of the methodological limitations of the Hanover Park Study (and these will be further developed in Chapter 6). In the light of this I will discuss a relatively new conception of attachment and culture, and argue that by taking this into account in future studies into attachment (together with naturalistic and ethnographic community investigations), the field of attachment and culture (with particular reference to the Strange Situation) will be usefully advanced.

Keller et al (1997) argue that new conceptual considerations with respect to the cross-cultural understanding of attachment are limited in the literature. They argue that Ainsworth's concept of maternal sensitivity as the predominant influence in the shaping of attachment quality is conceptually vague, and argue (following McDonald, 1992; as quoted by Keller et al, 1997) that attachment theory is mainly concerned with a behavioural system motivated by fear.

In this argument, emotional warmth is functionally different from attachment security, and they separate the attachment security system (motivated by negative feelings) from that of a social reward system predominantly motivated by positive emotional exchange (Keller et al, 1997). Ainsworth's Ganda studies (1967) and the Gusii studies of LeVine and LeVine (1966, 1988) are presented to illustrate this argument. These studies indicate that infants of mothers who were highly responsive (fear behavioural system) without necessarily displaying positive emotional exchange, developed a secure attachment.

This may be linked to a number of factors. For instance, child rearing practices need to be studied from different perspectives such as cultural, utilitarian and from the infant's perspective (LeVine, 1990). LeVine (1990) looks at the meaning of taking pleasure in children and thus inviting the jealousy of others. He also looks at the importance amongst the Gusii of not raising expectations amongst their children for too much attention (for which the mother simply does not have the time). For American mothers it is important to have an alert, active, talkative and responsive child, while for the Gusii mother her child must show respect, not be talkative, and not seek attention. LeVine speaks of how the white middle-class model of parenting stresses notions of parental efficacy and includes

lavish use of parental attention and praise – which is intended to produce self-confident adults who can master work environments (quoted by Howrigan, 1988, p.97).

Keller et al (1997) propose a ‘component model of parenting’ where parental warmth (as mediated by close physical contact) and parental contingent responsiveness are differentiated (DeWolff and Van IJzendoorn, 1997). They report on findings from a study in Germany, where it was found that sensitivity assessed in face-to-face interactions of mothers with three-month-old infants was related to contact-seeking, contact-maintaining and avoiding behaviour of 12-month old infants as assessed by the Strange Situation, but not to security of attachment (Keller et al, 1997). Maternal face-to-face contingency was however related to later security:

these results support our assumption that the developmental lines of early emotional reward versus security have to be differentiated (Keller et al, 1997, p.2).

It is not within the scope of this dissertation to discuss in any in-depth way the responses to this argument. Briefly however, Sroufe and Waters (1997) (while endorsing that issues raised are central to the field) argue that differences in Strange Situation behaviour are largely irrelevant unless validation (of attachment/exploration behaviour) in the natural environment has been done, and state that when this has been done “inconsistencies in data evaporate” (1997, p.4).

Russell (1997) introduces the concept of synchrony³⁰ in commenting on Keller et al’s argument. He suggests that researchers need to explore further possible mechanisms involved in the link between contingency and secure attachment.

Thompson (1997) argues (although not directly in response to Keller et al) that the role of sensitivity in determining attachment security needs to be considered from a different perspective and should be seen as a graded rather than a threshold phenomenon (p.596). Using Ainsworth’s original rating procedures, Thompson indicated how “mothers of insecure infants are insensitive *relative* to the mothers of securely attached infants, but not markedly insensitive in an absolute sense” (author’s emphasis) (1997, p.596).

Traditionally, results of the Strange Situation (A, B, C classification) have been presented as either supportive of, or critical of the use of the instrument in cultures other than Ainsworth’s original Baltimore sample. Furthermore, this criticism or support has concentrated largely on final A, B, or C

³⁰ Synchrony refers to the bidirectionality of the mother-infant interaction (Wendland-Carro et al, 1999). The infant’s behaviour, as much as it is influenced by the mother, may also affect the mother’s behaviour.

classification. Sroufe and Waters' (1997) argument for validation in the natural environment is crucial, but does not go far enough. Keller et al's (1997) view of a component model of parenting is an attempt to introduce a new conceptual consideration of culture and attachment. Had maternal sensitivity in face-to-face interactions been assessed in the Hanover Park Project, together with an assessment of parental contingent responsiveness by way of ethnographic data collection, I would have been able to make more sound hypotheses about Strange Situation behaviour and final attachment classification. This in turn might have yielded important data with regard to understanding the atypical proximity seeking behaviour evident in the sample. Finally, an analysis of the nature of each infant's and mother's behaviour and interaction in the natural environment would have provided crucial information about the availability and responsiveness of the attachment figure.

The following chapter will present the remaining findings of the Hanover Park Project, in order to situate the methodological and theoretical critique that follows in Chapter 6.

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CHAPTER FIVE - OTHER RESULTS FROM THE HANOVER PARK PROJECT

5.1 INITIAL DIFFERENCES/SIMILARITIES

Given the methodological problems of this study (which will be presented in the discussion) Table 5.1 analyses four variables (all measuring initial differences between intervention and control groups) in order to assess any significant initial differences.³¹

TABLE 5.1: T-test Results for Initial Differences with Respect to Age of Mother, Mother's Education level, Size of the Family and Stress Level.

GROUP		N	MEAN	STD DEVIATION	STD ERROR MEAN	T VALUE	P VALUE
MOTHER'S AGE	Control	20	22.05	4.71	1.05	.21	P=.83
	Intervention	20	22.35	5.84	1.31		
EDUCATION	Control	20	7.20	1.74	.39	1.4	P=.17
	Intervention	20	6.60	1.39	.31		
FAMILY SIZE	Control	20	1.65	1.09	.24	.77	P=.44
	Intervention	20	1.90	1.25	.28		
STRESS	Control	21	43.10	14.79	3.23	1.03	P=.31
	Intervention	20	47.50	12.51	2.80		

Table 5.1 indicates that there are no significant differences between the variables of mother's age and education level, family size and stress as far as group is concerned. While no comparisons are significant there is a trend for the level of education ($t=1.91$; $p=.064$; $df=38$).

The variable of stress is important in that it suggests (based upon the method used to select subjects³²) that the stress levels of the two groups were equal and together with the other three variables listed above that there were no significant initial differences between the two groups.³³

³¹ See Chapter 6.2.3 for a discussion of the implications of this.

³² The Family Stress Checklist (Healthy Start: Hawaii Department of Health, 1991) was used to select subjects from Obstetric Unit records.

³³ See Appendix 8 for a discussion of demographic group differences.

5.2 CONTINUOUS MEASURES

In order to measure relationships between the intervention and control groups, various continuous measures (for example the Griffiths, EPDS, weight, length at one and two years etc) were analysed as potential outcomes. Table 5.2 presents these findings using t-tests to test relationship.

TABLE 5.2: T-test Results for Birth weight, Birth Length, Weight at Year One, Length at Year One, Weight at Year Two, Length at Year Two, Edinburgh Postnatal Depression Scale, and Griffith Scores.

GROUP		N	MEAN	STD DEVIATION	STD ERROR MEAN	T VALUE	P-VALUE
BIRTH WEIGHT Grams	Control	21	3149.52	483.22	105.45	.25	P=.81
	Intervention	20	3117.00	355.72	79.54		
BIRTH LENGTH Centimetres	Control	14	50.36	3.43	.92	1.13	P=.27
	Intervention	14	48.36	5.68	1.52		
YEAR 1 WEIGHT Kilograms	Control	20	10.0820	1.1169	.2497	1.43	P=.16
	Intervention	18	9.5667	1.1.32	.2600		
YEAR 1 LENGTH Centimetres	Control	20	76.05	4.27	.96	.59	P=.56
	Intervention	18	75.00	6.41	1.51		
YEAR 2 WEIGHT	Control	21	12.357	1.376	.300	1.42	P=.16
	Intervention	20	11.805	1.105	.247		
YEAR 2 LENGTH	Control	21	83.462	2.717	.593	.49	P=.62
	Intervention	19	84.000	3.983	.914		
EDINBURGH POSTNATAL DEPRESSION SCALE	Control	21	12.67	4.37	.95	.52	P=.61
	Intervention	19	13.58	6.43	1.48		
GRIFFITHS (QUOTIENT)	Control	21	97.757	6.732	1.469	.93	P=.36
	Intervention	20	95.630	7.858	1.757		

Table 5.2 indicates that on a range of continuous measures there were no significant differences between intervention and control group. The table shows the means on which the t-tests were made, as well as the means for initial differences (i.e. whether the babies differed on the measures of weight and height prior to intervention). There were no significant results from this analysis. The comparison which comes closest to significance is for year two weight (Year 2 Weight) and here it is

the control group that is heavier (12.36 vs 11.81; $p=.154$). A similar pattern holds in so far as the controls have a lower EPDS, and a higher Griffiths.

When looking at the same outcomes as Table 5.2 by security (independent of intervention) it was found that once again nothing is significant, although the secure children did better on the Griffiths outcome (secure mean – 97.9; not secure mean – 95.4) and the EPDS of the secure children was better than that of the not secure group (secure mean – 12.3; not secure mean – 14).

A split plot ANOVA³⁴ was performed for weight, heights and head circumference across T0 to T2 by group. The results of this were also non-significant.

5.3 STRESS AND OUTCOME MEASURES

As has already been discussed control and intervention groups were separated by way of the Family Stress Checklist. In order to determine whether the stress variable had any linear relationship to the other outcome measures a Pearson correlation was run. Table 5.3 summarises the Pearson correlation results for the stress variable across a number of outcomes, continuous and initial measures.

TABLE 5.3: Pearson Correlation Between Stress Variable and Birthweight, Birthlength, Apgar Scores, Intended Length of Breastfeeding, Weight at Year One, Length at Year One, Weight at Year Two, Length at Year Two, Subsequent Pregnancies, Child Care Duties, and Edinburgh Postnatal Depression Scale.

	PEARSON CORRELATION	SIGNIFICANCE (2-TAILED)	N
BIRTH WEIGHT Grams	.084	.603	41
BIRTH LENGTH Centimetres	.070	.724	28
APGAR 1	-.013	.936	39
APGAR 2	.025	.880	39

³⁴ Split plot ANOVA is a test with at least two factors (e.g. group, gender, before/after) at least one of which is repeated on the same subjects (e.g. before/after, home/laboratory). With two groups (treatment and control) and a measure repeated on them (time 1 and 2) one can generate a split plot.

BREASTFEEDING In months	.193	.232	40
YEAR 1 WEIGHT Kilograms	.141	.339	38
YEAR 1 LENGTH Centimetres	.058	.730	38
YEAR 2 WEIGHT Kilograms	-.137	.393	41
YEAR 2 LENGTH Centimetres	.218	.176	40
SUBSEQUENT PREGNANCIES	.096	.549	41
CHILD CARE DUTIES	-.116	.471	41
EDINBURGH POSTNATAL DEPRESSION SCALE	.326	.040	40

The only correlation of any significance is that between stress and the EPDS. As stress increases so too does EPDS, as might be expected. In the light of the fact that this is what might be expected, and given the small sample size, other possible quadratic or non-linear relationships were not investigated.

5.4 SUMMARY

As is evident from the above results, findings from the Hanover Park Project were not significant. Furthermore, given the methodological limitations of the project (see Chapter 6), even if significance had been achieved, I would have been constrained in my ability to infer anything of note from them.

The aim of including these findings is for illustrative purposes, in order to highlight limitations in design and assessment, and in so doing provide a discussion point for the following chapter, which will provide a theoretical and methodological critique of the Hanover Park Project.

CHAPTER SIX - METHODOLOGICAL AND THEORETICAL CRITIQUE

6.1 INTRODUCTION

This discussion will comprise two sections. The first will be an evaluation of the Hanover Park project in terms of methodology and design. The second will focus on the actual intervention programme and discuss issues such as verifying the treatment and attrition rates. This will also be done with the intention of discussing possible policy implications of treatment trial findings in a country such as South Africa.

6.2 METHODOLOGICAL AND DESIGN DISCUSSION

Social interaction research, even in its simplest form, may be the most complicated and difficult methodologically and statistically of any major endeavour in the discipline.

(Appelbaum and McCall, as quoted by Howrigan, 1988, p.101).

The following discussion will critically analyse the methodology and design of the Hanover Park Project. Given that this was a pilot study, certain areas will simply be touched on, with an eye on facilitating improved design for later studies, rather than attempting to over-analyse the project itself. The aim here is to highlight crucial areas which need to be taken into account in the development and management of treatment-trials.

Olds (1988) states that the methodological and design problems he and his colleagues experienced in the Prenatal/Early Infancy Project were, for the most part, "inherent in all intervention research" (p.239). Olds conducted the Elmira study (an early study) in a community in New York State which had the highest rate of reported and confirmed child abuse and neglect, as well as being rated the worst in the United States in terms of economic conditions (Olds, 1988). The aim of the programme was to prevent a variety of childhood and developmental problems, and to improve the health habits and care-giving skills of the parents (Olds, 1988). In this regard, the aims of Olds' project have broad similarities with the Hanover Park Project and therefore the following discussion will follow Olds closely in attempting an analysis of the methodological and design problems encountered, and the limitations of the Hanover Park Project.

6.2.1 EXPERIMENTAL PLANNING

Tukey (1977) distinguishes between a 'clinical inquiry' and a 'focused clinical trial'. In a clinical inquiry huge amounts of data are collected relating to whether an intervention or therapy has been of

help to 'some class of patients' (Tukey, 1977). Olds (1988) argues that the aim of such a massive data collection (without specific elaboration of population and relevant outcome) is that the chances of finding statistically significant programme effects will be increased. A focussed clinical trial on the other hand is a "trial in which both the class of patients and the end point to be considered are clearly specified in the initial protocol" (Tukey, 1977, p.680).

With reference to the Hanover Park project, the identification of high-risk mothers in a clearly demarcated geographic area would suggest a focused clinical trial. On the other hand, while a wide variety of outcome measures were examined, these were not tied theoretically (in every instance) to the actual home visiting intervention³⁵. In addition, outcome measures were not linked to 'before' measures which would have assisted in elaborating as to the effectiveness of the intervention programme.

Small sample size would however militate against strict classification as a clinical inquiry. I would argue that the Hanover Park Project (as was the case with Olds' Prenatal/Infancy Project) falls somewhere between a clinical inquiry and a focused clinical trial.

Rather than attempting huge data collection, Howrigan (1988) argues convincingly that in a local project with limited resources (as was certainly the case in the Hanover Park Project) a single measure of outcome should be adopted, an outcome which may be assessed in an efficient and focussed manner, and not be too technically demanding.

Hennekens and Buring (1987) state that in the selection of a study population
it is essential to choose an experimental population
that will experience a sufficient number of the end
points or outcomes of interest to permit meaningful
comparisons between various treatments or procedures
within a reasonable period of time (p.183).

The principal aim of the reduction of child abuse in the Hanover Park area is neither likely (given the small sample size) nor accurately measurable in the light of particularly poor social and welfare

³⁵ The question of ensuring that the measures used to examine outcome are theoretically tied to the actual intervention will be dealt with in more detail in Chapter 6.2.2. Given that the intervention is aimed at improving mother-infant interaction, the fact that the first measure of this interaction is the Strange Situation at 24 months is problematic. In addition it could be argued that the Strange Situation measures attachment security which is not strictly a measure of mother-infant interaction.

provision in this area. The measurability referred to here goes to what Hennekens and Buring (1987) refer to as the 'likelihood of obtaining complete and accurate follow-up information'.

6.2.2 THEORETICAL FOUNDATIONS

Many of the problems with specifying the class of families likely to benefit and the probable outcomes of family support programmes stem from failure to ground the investigation in a theoretical framework

(Olds, 1988, p.242).

Theoretical foundation is basic in that it not only informs the development and nature of the intervention programme, but also the assessment process – what is assessed and what is not. A strong grounding in ecological theory for instance will ensure that “influences on the health and development of the child are viewed from the standpoint of social systems that operate at varying levels of proximity to the child” (Olds, 1988, p.242).

For example, it could be hypothesised that in the Hanover Park community pre-term delivery and low birth weight may in some way be related to maternal behaviour during pregnancy³⁶. This has broad implications in terms of whether intervention begins perinatally and to the nature of that intervention. Furthermore, if previous research in Hanover Park indicates high levels of alcohol and cigarette use, then one of the main aims of the intervention would need to be a focus on providing pregnant mothers with information and support in order to help them improve their diets and avoid alcohol and cigarettes.

While the Hanover Park Project was explicit in following a particular model (Healthy Start Programme) and was certainly not ‘without theory’, it is important that the theoretical foundations (be it attachment theory, family systems theory or ecology theory) be explicitly stated and articulated. It is also important that they be linked to the actual intervention, and that outcome measures are chosen in order to measure that which the intervention programme has been designed to effect.

Olds et al (1997) are explicit in stressing the importance of sound theoretical foundation. They outline the theoretical development of their programmes over time and argue that programme content and methods evolved substantially over the course of their three trials and were “increasingly connected in more explicit ways to theoretical foundations” (Olds et al, 1997, p.10).

³⁶ Following Miller and Merritt (1979) in *Fetal Growth in Humans*.

6.2.3 SAMPLING AND ESTABLISHING CONTROL GROUPS

In order to interpret assessment results adequately, and to ensure that un-measurable psychological characteristics (such as motivation to participate) do not influence final outcomes, random assignment to experimental and control group is essential. It is often the case that intervention studies (as a result of ethical considerations and cost implications) employ non-randomly assigned groups (Olds, 1988). With randomly assigned groups any differences between groups measured at outcome can be attributed to the intervention.

As has been described Chapter 3.1.1.1 the Hanover Park Project did not initially make use of a control group and it was only through the insistence of funders that a control group was 'found'. This is problematic in that while a control group was delineated, subjects were not randomly assigned to the two groups (but were rather chosen based on stress level). A further confounding consideration is the fact that the experimental group was chosen months before the control group. Despite the fact that there were no significant differences between the two groups in terms of assessed stress, because the two groups were not randomly assigned a confident attribution as to the effect of the intervention cannot be made.

There is an inherent confidence in the results of a well-designed and conducted randomised trial that cannot be achieved with an alternative allocation scheme

(Henekens and Buring, 1987, p.189).

Having said this it may be necessary to compromise random allocation in order to facilitate methodological strength elsewhere. Olds (1988) argues that choosing a few demographic factors so as to ensure equivalence of groups and not taking into account known characteristics in the initial design and analysis³⁷ may bias the results in unknown ways (Olds, 1988). If the control group, for instance, was found to have more mothers reporting partner and social support, and this was not controlled for at the outset, then this important (feature which may make the groups non-equivalent) would not be detected. It could however be argued that a problematic control group is better than no control group, but that a small sample size combined with limited outcome measures, makes statistical adjustment for any confounding variable difficult.

In the Hanover Park Project having already begun working with the experimental group, pure random assignment was simply not a possibility. Two steps (and I would argue successful ones) were taken in an attempt to go some way towards minimising the effects of this. The first was to return to clinic

³⁷ An example of this would be partner support and planned pregnancy, both of which were found to be significantly related to maternal mood and the mother-infant interaction (Cooper et al, in press).

records and making use of the same Stress Checklist choose a control group. Following this an attempt was made to further ensure equality of control and experimental group by matching them as closely as possible.

While these steps may have been successful, it should be noted that when the experimental group was initially selected, the twenty-five most highly stressed mothers were chosen. By definition the control group was then the next twenty five – and this is regardless of matching and the fact that there were no significant differences between the two groups in terms of stress. While the differences may not have been statistically significant, it is possible that group differences (rather than the intervention) may go some way in accounting for differences in outcome results such as seen in the Strange Situation.

It is important to repeat that the Stress Checklist was completed (for both groups) using hospital records, and thus the final score was based on stresses experienced at the time of clinic visitation and not according to maternal reporting of stress. Had this been the case then the implication of the time difference between the appointing of control and experimental groups would have been greater. Stress levels experienced antenatally or immediately after birth may well differ significantly from those experienced when the infant is six months old.

6.2.4 POWER AND SAMPLE SIZE

As has already been stated the Hanover Park Project was a pilot study and as such sample size was small. Other than the attachment findings, there were no results that even showed a tendency toward significant difference.

There are a number of possible explanations for this³⁸. Statistically it could be argued that in the light of the small sample size Type II errors are more common, and that a larger sample size 'would provide a more sensitive test of differences between the experimental conditions' (Robson, 1994, p.37). Obviously due to constraints on time and money (and the fact that this was a pilot study) a significantly larger sample size was not possible. Olds (1988) suggests a sample size of at least 400 in intervention research such as this given the design complexity.

³⁸ Possibilities include the initial sampling method (see Chapter 6.2.3 – Sampling and Establishing Control Groups), the actual intervention itself (see Chapter 6.3.1 – Treatment Verification), the planning of the project (see Chapter 6.2.1 – Experimental Planning) and the theoretical foundations of the intervention (see Chapter 6.2.2 – Theoretical Foundations).

Decision as to sample size should ideally be arrived at prior to project start and be determined both by using epidemiological data (Cooper et al, in press) and by taking into account to what extent outcomes are amenable to intervention. Despite the high levels of child abuse and neglect in Hanover Park detection is very difficult. This is due partly to a reluctance to report (Landman, personal communication). In addition, even if detection was possible, the statistical likelihood of child abuse and neglect amongst 50 mother-infant dyads (despite the fact that they were at high risk) remains small.

6.2.5 ASSESSMENT INSTRUMENTS

Assessment instruments that are utilised must be directly linked to the intervention and what the intervention is designed to affect/change (this is also linked to the issue of theoretical foundation which was discussed in Chapter 6.2.2. This serves not only to anchor the intervention in that which is measurable, but also avoids implementing (or failing to implement) too many assessment measures, or on the other hand failing to include the relevant ones.

Mother-infant interaction. With regard to measuring mother-infant interaction, the most glaring omission in the Hanover Park Project in terms of assessment instruments, is the fact that while the intervention is directly aimed at the mother-infant interaction, there are no measures of this interaction – neither as a before or as an outcome measure.

There are a number of such measures which can be utilised both as a measure of interaction between mother and infant, as well as to provide useful feedback for the intervention programme (Farran, 1986; Field, 1977; Izard et al, 1983; Murray, Beebe, Cohn and Tronick, 1982, 1983, 1987; Tronick et al, 1980). Lewis and Goldberg (1969) have shown how face-to-face engagement between mother and child improves the infant's ability to perform optimally on learning tasks, while it has been shown that where these are lacking, performance on later cognitive tasks is impaired (Dunham & Dunham, 1990; Murray & Cooper, 1997; Murray, et al, 1993).

What happens between parents and their children is highly complex (Howrigan, 1988), and until these complexities are taken into account “efforts to trace the effects of interventions will continue to produce weak and ambiguous findings” (Howrigan, 1988, p.119). Following Howrigan (1988) I am arguing that not only must measures of mother-infant interaction be employed, but that they must be continually improved upon and fine-tuned to assess the complexities of the interaction. This is true for assessing the dyadic relationship as much as for coming to terms with the cultural complexities of employing a measure such as the Strange Situation. This is also important in terms of “informing the

debate concerning the universality of the architecture of the mother-infant relationship (Richter, 1995) and the applicability of standard methods for assessing such relationships” (Cooper et al, in press).

A recent study (Wendland-Carro et al, 1999) found that a modest videotaped early intervention with 38 primiparous Brazilian women can enhance the sensitive responsiveness of mother to the infant. They argue (following Tronick, 1989) for assessing the bi-directionality of the mother-infant relationship. Synchrony and reciprocity characterise the relationship, and it is not simply about how the infant’s behaviour is influenced by the mother, but also about the way “the infant’s signals may affect the quantity and quality of caregiver exchanges” (Wendland-Carro et al, 1999, p.713).

Having said this, it is of vital importance that in settings other than those in which the above measures were developed, one looks at the broader cultural and social factors, which may shape the child-rearing practices. Traditional measures of interaction focus on the mother-child interaction, and may underestimate the amount of social and cognitive stimulation infants receive from others in the environment (Howrigan, 1988). Stevenson-Hinde (1998) in describing an Indonesian study (Zevalkink, 1997) states that Zevalkink’s thesis “provides a model for cross-cultural research in parenting” (p.699). This is because Strange Situation measures are combined with naturalistic direct observation together with the cultural context being assessed using “data collection methods taken from social anthropology, combining ethnographic interviews and participant observations” (Stevenson-Hinde, 1998, p.699).

Mental Development scales. The Hanover Park Project utilised the Griffiths Mental Development Scales in assessing cognitive development. The Griffiths Scales of Mental Development tap important developmental domains in a similar way to the Bayley Mental and Motor Scales. Hauser-Cram and Shonkoff (1988) argue that the Bayley Mental and Motor scales assess well-defined developmental domains and as such are therefore useful outcome measures. They go on to argue however, that their usefulness is strongly determined by the extent to which they are testing the areas of development which the programme is in fact designed to change or affect.

Als (1984) argues that The Bayley Scales of Infant Development are generalized and global assessments of “relatively biologically based and maturation-dependant skills in the infant” (p.215). In this regard I would argue that this would explain the lack of significant difference in the Griffiths scores between the intervention and control groups.

As has been discussed in Chapter 4.1, while the attachment results were not significant, there was evidence of a trend. In attempting to account for this (in the light of the lack of even a trend with the Griffiths results), I would argue (following Lyons-Ruth, 1990) that essentially cognitive measures such as the Griffiths are less vulnerable than attachment status to the effects of high social risk.

Assessment instruments must be closely linked to the goals of the intervention. If the goal of the intervention is to reduce child abuse and neglect and promote more nurturing parent-child relationships, then assessment measures appropriate to this must be used. Particular assessment measures of outcome can be assessed only in terms of what the original program goals were (Hauser-Cram & Shonkoff, 1988, p.80).

A cautionary note is in order. It could also be argued that the actual intervention programme was not an adequate one, or that using lay community workers (paraprofessionals) does not produce the kinds of effects that home visitation using nurses has produced (Olds & Kitzman, 1990, 1993; Olds & Korfmacher, 1998a;). Hiatt et al (1997) state that minimal evidence exists for the understanding of paraprofessional efficacy (p.78). It should be borne in mind however, that the reasons for this failure are far from clear (one possible reason may be due to the fact that paraprofessionals often receive limited training). Olds is at present conducting a trial in Denver which will assess precisely this issue, and determine the extent to which part of the failure in the past of paraprofessionals was because they were "provided with programme models that were not sufficiently developed" (Olds, Henderson, Kitzman, Eckenrode, Cole & Tatlbaum, 1998, p.18).

6.2.6 STRANGE SITUATION ADMINISTRATION PROBLEMS

An ongoing problem in the administration of the Strange Situation in the Hanover Park Study was the tendency of the stranger to distract the child during the first separation episode. On numerous occasions, at the moment that the mother was about to leave the room, the child was being distracted by the stranger. What makes this problematic is that it makes it difficult to know whether the child knows about the mother's departure and is ignoring it, or is simply ignorant of her departure. While this will in all likelihood be overcome in that at some point in the episode (usually at the second separation), the child will notice their mother's departure and will in all probability react accordingly, the stranger's role is not to distract the child from its feelings,³⁹ but to facilitate the separation and reunion behaviour of mother and infant.

³⁹ Sroufe – personal communication.

6.3 PROGRAMME EVALUATION

6.3.4 TREATMENT VERIFICATION

In studies in which there is only one treatment variable such as iron deficiency in mothers of newborn infants, treatment validation is easy. One provides iron supplements to mothers in the experimental group and a placebo to the control group mothers. Blood testing can accurately assess whether the experimental group has received the treatment.

When implementing an intervention programme such as the Hanover Park Project, treatment validation is of utmost importance in that the delivery of the intervention must occur in accordance with the treatment plan and in a uniform way across community workers. Olds (1988) spent a year piloting the Elmira intervention programme, a large portion of which included planning and evaluating methods of monitoring implementation.

An attempt was made in the Hanover Park Project to assess actual implementation. This was done through participant reports and by way of a focus group held at the end of the two-year intervention. While participant reports must be completed their methodological usefulness may be limited. It could be argued that mothers at high risk, with high levels of stress would generally respond very favourably and be 'grateful' for the visit.⁴⁰ In addition, participant reports tap subjective impression, rather than comprehensively assess the extent to which the intervention has remained theoretically, practically and methodologically true to the original aim.

Focus groups are also a good attempt at treatment verification, but lack methodological rigour. There is also the danger which Als (1984) refers to as the 'halo effect'⁴¹, where interviewees know that evaluation staff are part of the research programme and grateful for the help that they have received, positively inflate their reports. Following Nurcombe et al (1984), while it would be impossible to eliminate the 'halo effect' entirely from a research such as this, one needs to acknowledge its possibility.

Without ongoing and comprehensive evaluation and assessment of the process of intervention by whatever means decided upon⁴², the ability to accurately ascribe group differences (or in this case the lack thereof) to the intervention itself is seriously compromised. Korfmacher et al (1998) argue that methodological development in intervention process research is crucial and should include 'dose'

⁴⁰ Participant reports are invariably highly positive (Cooper, personal communication).

⁴¹ The 'halo effect' is "the overall attitudes or opinions that influence how favorably or unfavorably a child or family is evaluated on specific measurement items" (Upshur, 1988, p.528).

⁴² This might involve a combination of focus group, taping and transcribing sessions, the completion of evaluation forms by the community workers and regular supervision and updating of training.

measures of programme use (amount of participation) but also other measures such as measures of engagement and session content.

Rather than viewing treatment process as a static entity, there needs to be development of theory and analytic strategies that take into consideration the change in use of the intervention as it unfolds over time (Korfmacher et al, 1998, p.62)

6.3.1.1 BLIND ASSESSMENT

In a trial such as the Hanover Park Project it is essential that individuals on the assessment team remain blind to the experimental status of the mothers. Due to budget constraints this was not achieved and remains a flaw in the study. Demographic data is relatively impervious to bias, but psychometric testing such as in the Griffiths is not. With regard to the Strange Situation, while the person responsible for the organisation was not blind to status, the video-coder was.

6.3.1.2 HORIZONTAL DIFFUSION

Olds (1988) argues that programme effectiveness may be blunted if aspects of the intervention are communicated to members of the control group. In a community such as Hanover Park which is characterised by high density (and possibly close knit family and kin networks – although this would need to be established) this is a real possibility. Asking subjects in the intervention group whether they have had any contact with those from the control group would go some way in assessing horizontal diffusion but does not account for contacts where group status is not known, or for indirect effects of other contacts with people not enrolled in the programme at all (Olds, 1988). The possible consequences of horizontal diffusion were not taken into account into the planning or management of the Hanover Park Project and remain a possible limiting variable.

6.3.2 ATTRITION RATE

Ensuring equivalence of experimental and control groups at the beginning of a study is achieved through random assignment. Random assignment “cannot however assure equivalence at the completion of the study” (Olds, 1988, p.256). Drop out rates due to factors such as non-participation (which may be more likely in the experimental group in that, for example, their involvement requires more participation than those in the control group), illness and migration may result in the false exaggeration of the positive effects of the intervention.

From an initial sample of 50, nine subjects fell out during the course of the study. Drop out rate from the two groups (four from the control group and five from the intervention group) was very similar. Simply accounting for the stated or obvious reason for fall out from the study does not prevent the possibility that this attrition may have affected the equivalence of the two groups in terms of important background characteristics⁴³. Without any comprehensive data on the background of those mothers who fell out of the study, little can be equivocally stated about statistical equivalence.

6.3.3 PROGRAMME GENERALISABILITY

In any intervention/research study the long-term aim must be the implementation of the programme with a wider population⁴⁴. Findings from the study therefore not only have to be generalisable to the wider community within which the study may be situated, but also potentially to national communities. Ensuring that the experimental population is representative of the wider community is intrinsic to ensuring the validity of the study.

In addition, wider dissemination must take into account the training and supervision needs of the community workers and the cost implications of this. Without taking into account the potential cost of extensive supervision and training, and the possibility that future community workers may 'not be as highly motivated and trained as individuals who implemented the original service' (Olds, 1988, p.259), adequate generalisation may not be possible.

The issue of generalisability also touches upon the fact that not only is the intervention group small, but also a select subgroup within the experimental population. "This may affect the ability to generalise those results to either the experimental or the reference population (Hennekens and Buring, 1987, p.185).

Hennekens and Buring (1987) caution against group differences which may arise as a result of volunteerism (higher motivation and linked often to age and education level) and recommend the collection of baseline data in order to assess the presence and extent of differences, and in so doing ensure generalisability.

⁴³ Olds (1988) monitored this by "carrying out analyses of treatment by drop-status interactions, using background characteristics such as the dependent variables" (p.257).

⁴⁴ See Appendix 11 where the Parent Centre describes the intermediate goal of the Hanover Park Project to be the 'establishment of a primary preventive service for all new mothers in Hanover Park in partnership with existing State and NGO health services', with the ultimate goal being the 'establishment of a national network of neonatal home visiting as one of the preventive aspects of primary health care'.

While none of the above was conducted in the course of the Hanover Park Project, it is possible that some of this could be done in a post-hoc manner. For instance, supervision and training time could be calculated and factored into the cost of the project. Ideally however, planning such as this must be done at the beginning and during the course of the project.

6.3.4 GROUP DIFFERENCES

Traditional analysis dictates that in a randomised control trial between group analyses (intervention versus control) are conducted. Belsky (1986) states that

even when intervention efforts are well specified, it is naïve to assume that they are administered to, or experienced by, all participants in exactly the same manner (p.1302).

This goes both to ensuring that the intervention programme is being implemented in a consistent and reliable manner⁴⁵, but also to setting up (in the planning stage of the intervention) methods by which *within* group differences can be assessed. A discussion of all the possibilities in this regard is not within the scope of this study. Belsky (1986) recommends rating scales to assess rapport within each treatment session which are then correlated with a select set of dependant variables⁴⁶ which he believed would “be most likely to be affected by variation in the experience of the experimental treatments” (p.1302).

6.4 POLICY IMPLICATIONS

The scientific basis for widespread dissemination of home visitation as a strategy for preventing child maltreatment is not well established (Olds et al, 1995, p.365).

In a developing country such as South Africa it is essential that research into mother-infant intervention not only includes a cost analysis so as to inform government about the implications of implementation of such a service, but also that the researchers consider the impact on society of the programme. In this regard Kazdin (1999) speaks of ‘social significance’ (not simply clinical significance) and argues that it is important to assess “to what extent does the intervention produce outcomes that are important to or have an impact on society” (p.338).

⁴⁵ See Chapter 6.3.1.

⁴⁶ Parenting – overall engagement, response, stimulation, care etc. Marriage – overall engagement, baby related interaction, joint attention, shared pleasure (Belsky, 1986).

The number of studies which now include a cost analysis (Olds & Korfmacher, 1998a) reflects the concerns of managed care and health policy makers (Kazdin, 1999). Kazdin goes further to argue that extending these cost analyses (as outcome studies investigating the utility of psychotherapy at an individual level have done), to the societal level is of crucial importance (Kazdin, 1999). Further, when thinking of 'social interest', it is not simply about cost saving but potentially also about lower levels of truancy, rates of arrest, infant hospitalisations and deaths (Kazdin, 1999).

If societal significance and the possibility of governmental health bodies making use of research when planning policy is built into any research study from the start, then the likelihood of producing research which is 'below par' will be minimised.

Olds, Pettitt et al (1998) argue that many programme models which have been implemented were not tested through randomised clinical trials, which they argue is "the research design best able to produce defensible evidence" (p.90). In South Africa with limited resources and numerous demands on government spending, results from intervention studies must be comprehensive, thorough and defensible.

If such programmes fail to generate the kinds of results promised by policy groups, the public and policy communities are apt to become even more cynical about the value of health and social science, even though the problem stems not from the science itself but from the underutilisation of science (Olds, Pettitt et al, 1998, p.90).

Chapter 7 will present a brief summary of the main recommendations for future treatment-trials in the area of mother-infant intervention.

CHAPTER SEVEN – RECOMMENDATIONS

In this section I will summarise some of the main aspects of the lessons learned from the Hanover Park Project with regard to future treatment-trial interventions. I will present only a brief discussion of some of the salient points. This will not attempt to be comprehensive as I am arguing that following the discussion in Chapter 4 and Chapter 6 many of the recommendations can be assumed and are self-evident.

7.1 PLANNING

Central to any envisaged treatment-trial is comprehensive planning (both theoretical and methodological) prior to implementation. In this way assessment instruments and outcome measures can be linked to hypothesised outcome, and be focussed on the aspects (for instance) of the mother-infant relationship that the intervention is designed to affect. Simply implementing an intervention followed by the large-scale gathering of data, will in all likelihood, result in non-significance or at the very least ambiguous findings.

Given the preceding discussion, it can be assumed that random assignment to experimental groups is a necessity. This can not be stressed sufficiently if outcome data is to be reliably attributed to the intervention. With regard to questions about horizontal diffusion for instance, allowances may have to be made for family members or subjects living in the same house, as well as other examples of potential non-equivalence between groups, but outside of this, random assignment is a necessity.

7.2 ASSESSMENT INSTRUMENTS AND OUTCOME MEASURES

Statistically it is useful to have before and after measures. Given random assignment it could be reasoned that although this is not necessary, it acts as an additional safeguard. The existence of before and after measures allows for both real measures of change, and also permits post hoc adjustment for non-equality of groups.

The collection of socio-demographic data in the Hanover Park Project was limited. The importance of collecting important background and demographic data cannot be overstated. For example, data on partner support and poverty status can yield significant information about risk and resilience status of infants in a particular community. Cooper et al (in press) found significant relationships between lack of partner support and poor mother-infant interaction, while there was no significance between poverty and poor interaction, which has important implications in terms of efficacy of any intervention, as well as for providing information which can be beneficially fed back into the actual intervention.

Given that the major element of a treatment-trial is to determine treatment efficacy, I would argue that data on treatment verification must be systematically collected throughout the course of the intervention, and changes made if it is felt they are necessary.

7.2.1 STRANGE SITUATION

The Strange Situation procedure should be administered at either 12 or 18 months. In the light of the discussion in Chapter 5, administration of the Strange Situation must be coupled with ethnographic community data and a comprehensive assessment of maternal behaviour at home. Possibilities in this regard include Ainsworth's Maternal Sensitivity Scales (1978), the HOME assessment or Lyons-Ruth et al's (1990) Maternal behaviour at home, which involves a 40 minute naturalistic videoing within the home which is then coded in 10 4-min intervals on 12 five-point rating scales and one timed variable. Variables include Sensitivity, Warmth, Verbal Communication, Interfering Manipulation, Covert Hostility.

In summarising this issue Belsky (1997) argues (and while he is specifically speaking of attachment, I would argue that it is also of relevance to any outcome measures employed in a treatment-trial)

Careful consideration should be given to *characteristics of children* as well as to the *ecological niches in which they reside* in efforts to illuminate such conditions (my emphasis) (p.600).

7.2.2 MOTHER-INFANT INTERACTION

One of the aims of the intervention was to intervene in the mother-infant relationship and to increase parental responsiveness. The problem with the study as it stands is that the nature of the mother-infant relationship is not being assessed directly but rather by extension – measures of attachment and cognitive outcome. Measures of parental responsiveness and contingent parental interaction at a face-to-face level are essential. If it was then discovered that there was no difference in these interactions between the control and intervention groups and bearing in mind other methodological difficulties of the study, then hypotheses could be made about the efficacy of the intervention programme.

7.3 GENERAL

Olds (1988) stresses the importance of involving a statistician at all stages of evaluating family support programmes, including the earliest stages of planning. This becomes especially important if the investigator decides to analyse the programme within the context of the complex ecological system in which programmes and families are inevitably embedded.

An important principle in research of this nature (and one which was not adhered to in the Hanover Park Project is that assessors must be blind to experimental status of the mothers.

As was discussed in Chapter 6.3.3 and 6.4 a comprehensive cost analysis must be done. Without this it will be difficult to attempt to convince government as to the benefits and implications of implementation of the intervention. In this regard I would like to sound a cautionary note following Olds (1992) who argues that

although the prenatal and infancy home visit program that we are evaluating shows considerable promise ... many positive effects of such programs may not be translated immediately (if ever) into government or societal savings. In our view, we must avoid allowing financial considerations to become the primary force that determines whether such services are funded (p.169).

7.4 FUTURE IMPLICATIONS

A final word of caution, and this goes to the dangers of having unreal expectations of what research can tell us. When designing an intervention and looking at parenting styles and attitudes, it should be borne in mind that parents in different cultural groups tend to rear their children pragmatically (Howrigan, 1988). Some groups, for instance, raise children able to adapt to rural farm life, while others focus on the demands of a first world industrial setting. In making a recommendation for the Thula Sana project in Khayelitsha it must be borne in mind that

interventions are unlikely to have large effects if they are not accompanied by large-scale institutional change in society (Howrigan, 1988, p.97).

Mother-infant based projects (be they service oriented or research based) are very much in vogue at present. The danger is that in our zeal to implement such projects, we fail to ground them in sound theory or utilise good science to assess programme efficacy. The result of this is further ammunition for a sceptical public and for policy makers who will argue that programmes have tended to offer more than they have produced (Olds, O'Brien et al, 1998). On the other hand, while there were significant limitations with the Hanover Park Project, valuable lessons were learned and insights gleaned relevant to future research, not to mention providing a service to a number of mothers at risk.

While we should always seek to "maintain the integrity and utility of the scientific enterprise" (Olds, O'Brien et al, 1998, p.98), we must also remain true to the constituency we serve – that of mothers and infants in need.

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APPENDIX 1

HANOVER PARK COMMUNITY: HISTORY AND SOCIO-DEMOGRAPHICS

Hanover Park is named after a street in District Six and was started in 1969 by the Cape Town City Council. Hanover Park was 'created' in the 1960's when thousands of people were forcibly removed from their communities as a result of the Group Areas Act.

Hanover Park consists largely of two and three story flats, of uniform design. Andrew and Japha (1978) state that part of the governments aim was to turn Hanover Park into an isolated unit of development rather than part of the city as a whole. This was achieved by placing buffer zones and major road systems between Hanover Park and wider Cape Town.

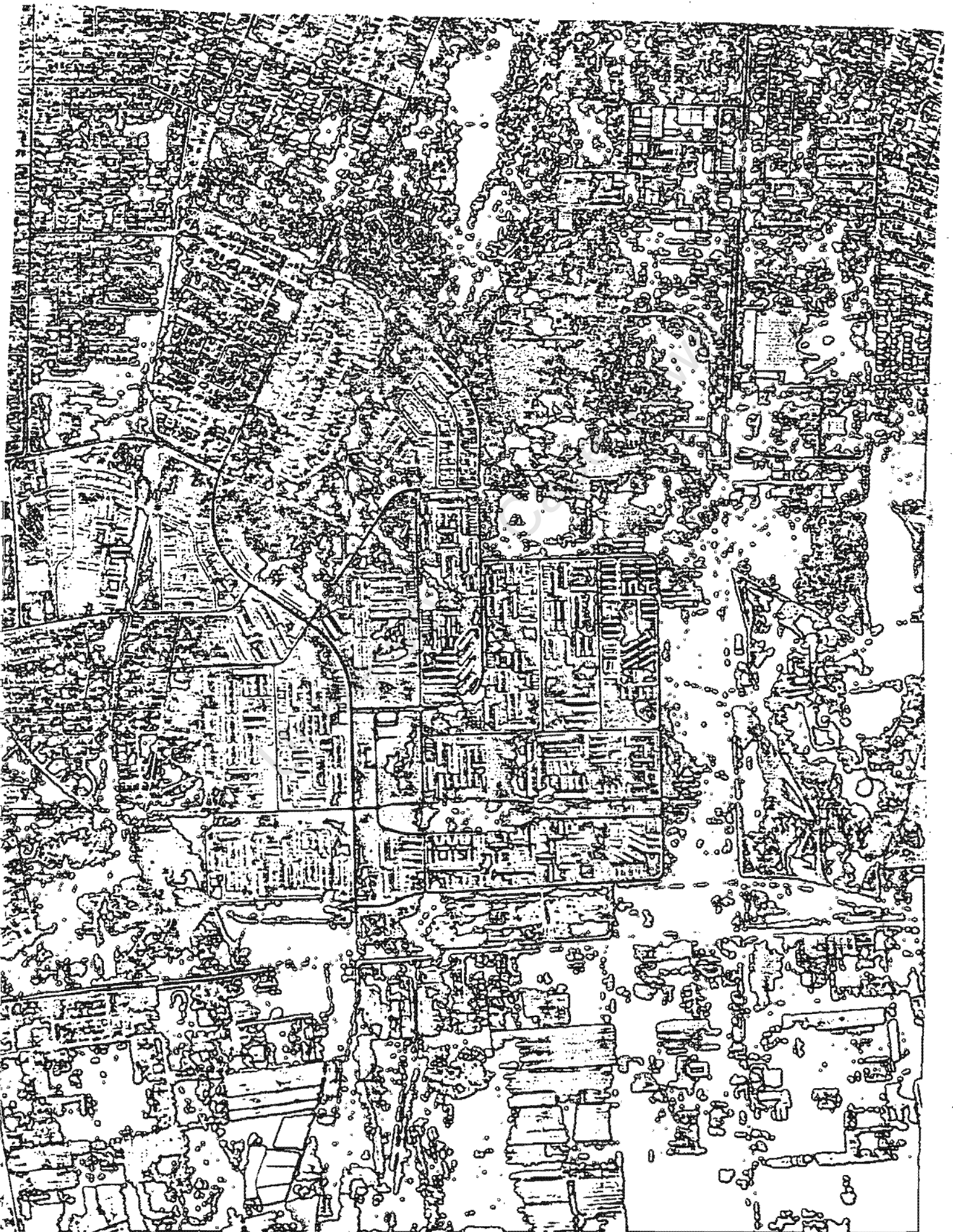
Dewar and Uytenbogaardt (1981) describe the environmental conditions of Hanover Park as "sterile, boring and unsafe" (p.147). It is characterised by high levels of poverty, unemployment, high-density living, violence and gangsterism.

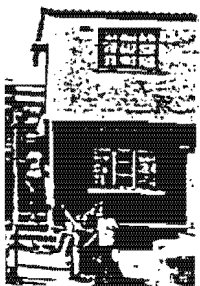
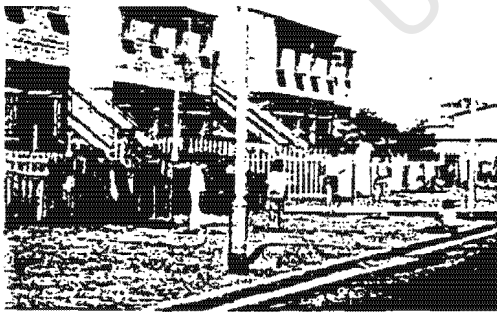
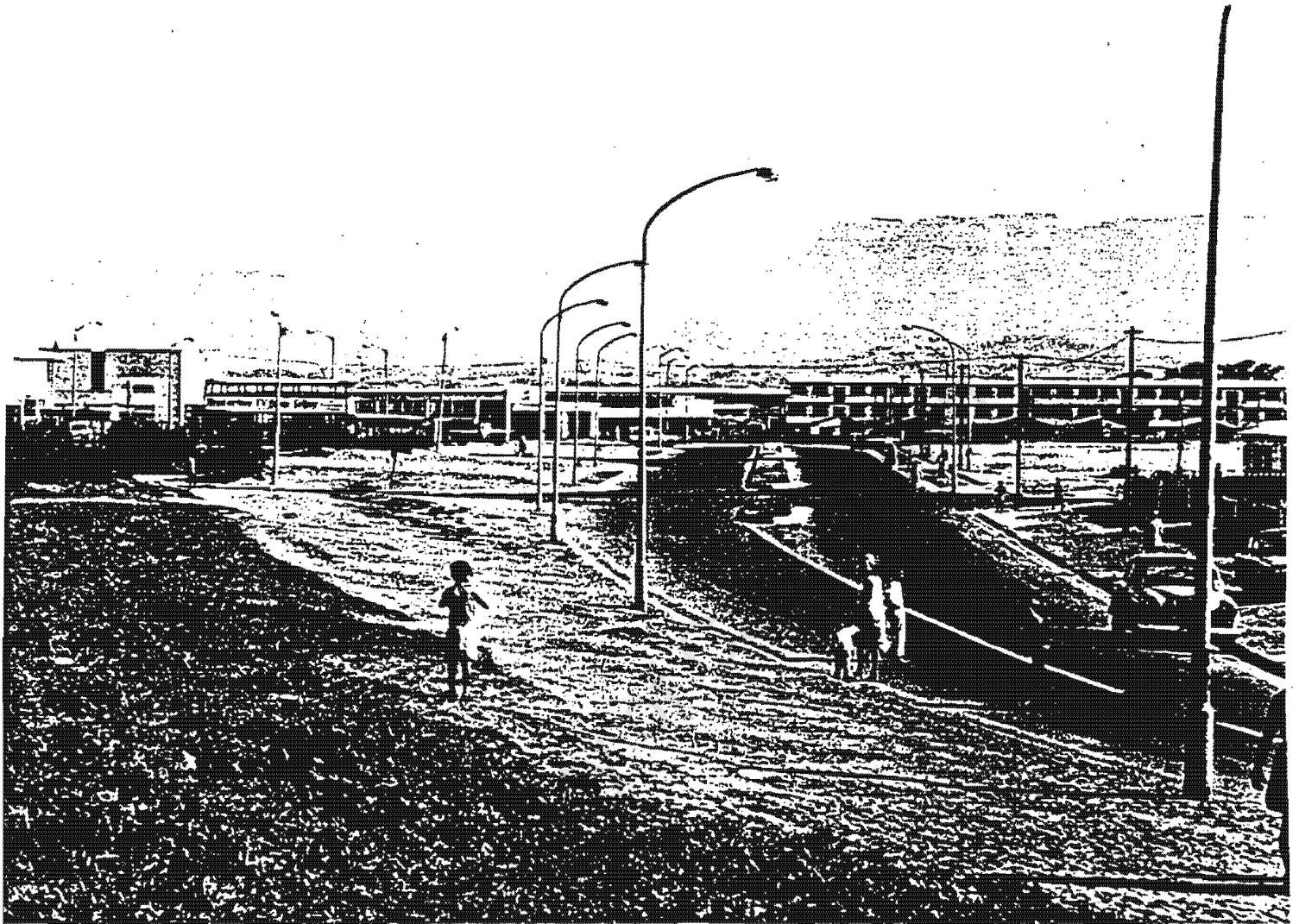
According to the last available census (1991) the population level of Hanover Park was 26 676 (12 724 males and 13 952 females). Population breakdown was as follows: Coloured (26426); Asian (159); White (48); and Black (43). In the age group 0-14 there were 8343 people; 17467 in the 15-64 category and 866 people in the age group of 65 and over. In terms of educational qualifications 5181 people are listed as having no education; 20657 are described as having Standard 10 and below (and including those still at school); 103 have completed some form of diploma or certificate; 18 have completed a degree (inclusive of Bachelors, Masters or Doctorate). Occupational breakdown is as follows: Professional and semi-professional (153); Managerial, administration (75); Clerical and sales (1365); Transport and delivery (438); Service (914); Farming and related (89); Artisan, apprentice and related (848); Production and foreman (4056).

Unemployment is given as 16019⁴⁷ while 2504 are described as actively looking for work. With regard to personal income 16560 people are listed as having no income. Sixteen thousand and nineteen people are listed as being not economically active while just over 16 500 are listed as having no income. Annual per capita income is 2 518 while monthly income is 210.⁴⁸ Of a total of 4799 dwellings in Hanover Park 130 are fully paid for and 631 partly paid off.

⁴⁷ Not looking for work – not economically active.

⁴⁸ It should be noted that this figure is based on total population in Hanover Park and not only on the economically active adult population.





APPENDIX TWO

THE ATTACHMENT CLASSIFICATION CATEGORIES

<i>Label</i>	<i>Brief Description</i>
A ₁	Conspicuous avoidance of parent in reunion episodes (e.g., ignoring, pointed looking, turning or moving away). No approach in reunion, or approach is abortive. Little or no contact maintaining if picked up. Tendency to treat the stranger much as parent is treated.
A ₂	Some tendency to greet and approach the parent mixed with tendency to turn, move, or look away, or to ignore. Maybe some contact maintaining, but in the context of avoidant behavior.
B ₁	Greets parent on reunion with positive distance interaction rather than approach and contact seeking. Little contact-maintaining if picked up. Little separation distress, and perhaps some avoidance during reunions.
B ₂	Tends to approach and greet the parent, but only low degree of contact-seeking behavior. Perhaps avoidance in episode 4. Low contact maintaining if picked up.
B ₃	Actively seeks physical contact on reunions, and shows active contact maintenance. Gains comfort from attachment figure, and thus soothes after separations and is subsequently able to explore in his/her presence. Little avoidance or resistance.
B ₄	Clear contact seeking, especially in reunion episodes, but the contact seeking and contact maintaining behaviors are less active and competent than those of B ₃ infants. The infant does not gain sufficient security or comfort from the adult's presence to permit subsequent exploration and affiliation, particularly in the post-separation episodes. Seems anxious throughout. May also show some resistance to parent.
C ₁	Strong proximity- and contact-seeking and contact-maintaining in reunion episodes, mingled with conspicuously resistant, angry behavior. High separation distress. Resistance may also be directed toward stranger.
C ₂	Extreme passivity, with little exploration even in pre-separation episodes, and little active proximity/contact seeking or contact maintenance although, largely by crying, they manifest a desire to be held. Resistant behavior not as strong as in C ₁ infants.

Note: Fuller details regarding classification are provided by Ainsworth et al. (1978). Only central distinguishing characteristics are selected for mention in this table.

Source: Lamb et al, 1995.

APPENDIX THREE

PREDICTIVE POWER OF THE STRANGE SITUATION

A: INTRODUCTION

Lamb (1985) states that when looking at the predictive power of the Strange Situation two hypotheses have to be considered. The first is Sroufe's (1983) emphasis on the importance (formative) of the quality of the parent-infant interaction in the first year of life, which is reflected in the Strange Situation measure at the end of this year. Sroufe concentrates here on what occurs within the child in order to consolidate the earlier pattern rather than on how major environmental disruptions (if they occur) may effect the continuity of behavioural organisation (Lamb, 1985).

The second hypothesis (which according to Lamb is rarely considered by attachment theorists) is the proposal that when there has been continuity in care and attachment, then the effect of the parent-infant interaction will be most evident. This implies that if rearing conditions change, and as a result so does the relationship, then the predictive power of the Strange Situation is limited, and as such may simply be a reflection of the current status of the relationship between mother and infant. A lack of predictive validity for the Strange Situation would suggest that the 'locus of stability is in care-taking conditions, not in the infant' (Lamb, 1985, p.140).

B: STUDIES ON STRANGE SITUATION PREDICTION

Sroufe's Minneapolis studies are the most widely cited on the predictive power of Strange Situation classifications (Lamb, 1985). Matas, Arend and Sroufe (1978) assessed attachment at 18 months followed by an assessment (at 24 months) of the behaviour of the child and mother in play and problem solving. Results (based on independent assessments) indicated that infants classified as B were more enthusiastic, persistent, co-operative and, in general, more effective than insecurely attached infants (Matas et al, 1978, p.547). The authors conclude that

The demonstration of continuity in adaptive behaviour between 18 and 24 months is important for construct validation of the secure attachment concept.....
Assessments of quality of attachment strongly predicted later aspects of more autonomous functioning at required by the integration of Bowlby/Ainsworth attachment theory and neo-analytic psychoanalytic developmental theory

(Matas et al, 1978, p.556).

Waters, Whipman, and Sroufe (1979) studied infants at 24 months following an 18 month Strange Situation assessment, and found significant differences in affective sharing between B and non-B groups.

Arend, Gove and Sroufe (1979) re-contacted 26 of Matas et al's 1978 study when they were between 54 and 70 months of age. They found that the B group was more ego-resilient and curious than A and C infants. While there were reliable differences between B and non-B groups there were few differences between the A and C classification. Lamb (1985) argues that because Arend et al's sample was a stable middle class one, it is plausible that continuity in rearing conditions was critical rather than earlier patterns of infant-mother interaction.

Sroufe and Rosenberg (1982, Quoted by Lamb, 1985) attempted to replicate Matas et al's findings with a socially disadvantaged sample - which became known as the Minneapolis Study of Disadvantaged Families. They found that at 24 months B group infants were more enthusiastic, affectively positive, compliant and with less negative affect.

Erickson and Farber (1983, Quoted by Lamb, 1985) conducted a 42 month assessment and found that A and B classifications were more enthusiastic and persistent. They found no significant differences between A and B. Van den Boom (1994) states that Erickson and Farber (1983) and Main (1973) found that insecurely attached children were less successful in their efforts to master challenging tasks.

Londerville and Main (1981) found that insecurely attached children appear less effective in interpersonal relationships than do securely attached children, while Maslin and Bates (1982) discovered that an anxious attachment was a predictor of disharmony in the mother-toddler relationship (Quoted by Van den Boom, 1994).

Easterbrooks and Lamb (1979) studied the relationship between quality of infant-mother attachment and infant competence in initial encounters with peers and found that there is a relationship between quality of mother-infant attachment and infant peer competence.

Jacobson and Wille (1986) (in a longitudinal study of 24 children) looked at the influence of attachment pattern on developmental changes in peer interaction from the toddler to the preschool period. At age 3 secure children received the most positive responses, avoidant children fewer, while ambivalent children received more disruptive responses and resistance from their playmate.

Lieberman (1977) in a short-term longitudinal study found that security of attachment as assessed at home was highly positively correlated with peer experience. Furthermore, Lieberman's findings indicate that peer competence in pre-schoolers is related to both child-mother and child-peer relations. (p.1284). Lieberman argues that the high correlation between secure attachment and peer experience suggests an ability on the part of the mother to be responsive to her child's growing interest in peers, which is consistent with Ainsworth's linking of secure attachment to the mother's ability to adapt to the child's changing circumstances (Quoted by Lieberman, 1977, p.1285).

Lutkenhaus, Grossman and Grossman (1985) found that securely attached children (at age three) were found to show greater sociability in interactions with unfamiliar individuals than insecurely-attached children.

These results lend support to the claim of Ainsworth and Bell (1974) that early experiences of being effective in influencing the behaviour of a responsive, sensitive mother are predictive of later self-confidence (Lutkenhaus et al, 1985, p.1541).

Main and Weston (1981) studied the quality of the toddler's relationship to mother and to father, related to conflict behaviour and the readiness to establish new relationships. Conflict behaviour occurred in insecure children (with the mother), while friendly responsiveness to the adult actor was affected by the relationship to the father as well as the mother.

Sroufe, Fox and Pancake (1983) undertook a major study in which they invited 40 children (who had previously been assessed in a Strange Situation) to a special nursery school programme where they were measured in a variety of ways - observations of peer interactions, friendship pairs and behaviour towards teachers to name a few. Children in the B group scored higher on ego resilience and self-esteem, positive affect, lower negative affect and lower scores on measures of dependency. They also achieved higher scores on social competence, number of friends, popularity, and were higher on ratings of social skills, compliance and empathy.

Sroufe et al (1983) found that A and C children were significantly more dependant than children rated as B. In a later study Sroufe (1983) using teacher measures of dependency found no significant differences between A and C but found that there were significant differences between B and non- B groups.

Erickson, Sroufe and Egeland (1985) combined the data from Sroufe's nursery school study with 56 children from the Minneapolis Study of Disadvantaged Families, and rated them on a seven point

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scale. Forty of the children attended a school set up at the Minnesota Institute of Child Development, while 56 attended pre-school or day care centres in the area. This study found that anxiously attached children functioned more poorly in pre-school than did securely attached children (p.162). Anxious/avoidant children were highly dependant, non-compliant and had poor social skills when interacting with their peers. Anxious/resistant children lacked agency, confidence and assertiveness.

During the course of the study teachers were asked to rate behaviour problems on a checklist. When these were corroborated with observer ratings 'the predictive power of attachment classification was demonstrated most dramatically' (Erickson et al, 1985, p.163). Sixteen of the twenty-two children in the well functioning group had been securely attached while the majority of the children in the 'problem' group had been anxiously attached as infants. In securely attached infants who later developed problems, the authors found a pattern of inadequate maternal care and support at important later stages of development. Conversely, sensitive and responsive mothers at later stages of development often had well functioning children at pre-school while they had been anxiously attached as infants.

In reviewing the literature on the predictive power of the Strange Situation Lamb argues that

although early attachment status was associated with later behaviour problems in pre-school, this was true *only* when attachment status was stable in the second year, implying continuity in quality of care-taking. Second, attachment status, even when stable, was not a highly efficient predictor of pre-school behaviour problems. Other antecedents associated with later problems were often associated regardless of attachment status, making independent contributions of their own (Lamb, 1985, p.151).

FAMILY STRESS CHECKLIST

Rating Scale for Family Stress Checklist

1. Parent beaten or deprived as child

- NORMAL:**
- a. No corporal punishment
 - b. Infrequent spankings (less than 6 times ever with hand, belt, stick, etc. which left no marks or only lasting up to an hour or so)
 - c. Received consistent nurturing

- MILD:**
- a. Frequent spankings with or without some bruises
 - b. Received intermittent nurturing
 - c. Sibling with history of "a" or "b"
 - d. Witnessed spouse abuse of parents

Rate as MILD if one
or more applies

- SEVERE:**
- a. Severe beatings, including bruising if lasting for days
 - b. Raised by more than 2 families
 - c. Raised by one or more families but with no nurturing parent model
 - d. Bizarre psychological abuse, eg. made to eat in garage or doghouse
 - e. Hx of running away from home
 - f. Constantly scapegoated as "black sheep" of family
 - g. Hx of sexual abuse
 - h. Removed from home or abandoned

Rate as SEVERE if
one or more applies

2. Parent with criminal/mental illness/ substance abuse

- NORMAL:**
- a. No arrests or ONE TIME mild offence, eg, teenaged shoplifting or stealing a car. Do NOT include any crime against a person
 - b. No drug use
 - c. ONE TIME experimental use of any drug
 - d. No alcohol use or occasional use up to 1 drink/day if this is NOT seen as a problem by family (if seen as problem, rate as MILD)
 - e. Occasional drunkenness up to 1/month if NOT seen as problem by family (if seen as problem, rate as MILD)
 - f. Never required psychiatric care

- MILD:**
- a. More than one minor traffic violation or record of minor juvenile or adult crime (speeding, minor theft)
 - b. Any drug use more than 1x (rate as SEVERE any drug use during pregnancy)
 - c. Drinking regularly with more than 1 drink/day or drunkenness more than once a month (if seen as problem, rate as SEVERE)
 - d. Hx of or currently seeing psychiatrist/psychologist for minor life crisis, eg. counselling to improve life, rather than therapy for psychiatric problem
 - e. Parent demonstrates ongoing rehabilitation (for more than 2 years) but with history of:
 - Severe mild offenses/arrests
 - Crime against a person, eg, assault and battery, armed robbery
 - Prison term
 - Heavy drug use
 - Alcoholism or heavy drinking
 - Mental hospitalization or long term psychiatric care

Rate as MILD if one or more applies

2. Parent with criminal/mental/illness/ substance/ abuse (continued)

SEVERE: a. Chronic pattern of criminal activity

Rate as SEVERE if
one or more applies

b. Current or recent prison term (within last 2 years), driving under influence of alcohol or hx of theft, burglary, felonies, prostitution

c. Chronic/heavy use of any drug, including marijuana

d. History of recurrent episodes of heavy drug use, even if not currently using, eg, heroin addict, now reformed, but who has repeatedly reformed and returned to heroin in the past

e. Any drug use at any time during pregnancy whether know about pregnancy or not

f. Current chronic heavy drinking/alcoholism

g. History of recurrent episodes of alcoholism, even if presently "dry"

h. ANY drinking/drug use, regular or occasional, which results in violent episodes

i. Current indications and/or diagnosis of psychosis, eg, medication prescribed by psychiatrist or hx of hospitalization

j. Chronic pattern of psychiatric problems

k. History of diagnosed schizophrenia or sociopathic behaviour

3. Parent suspected of abuse in the past

NORMAL: a. Not present

MILD: a. Official report of mild abuse; children not placed in foster care or removed from home

b. Chronic use of illicit drugs with children present but not where parents are "out of it"

c. Abuse suspected, but not confirmed ,

SEVERE: a. Official report of serious abuse/death

b. Mysterious death of sibling

c. Children placed in foster care/removed from home

d. Child allowed to use any illicit drug (ever)

e. Child present with adult use of any substance where parent is un able to care for child due to intoxication

f. Child abuse suspected in previous marriage for either parent

Rate as SEVERE if
one or more applies

University of Cape Town

4. Parent with low self-esteem, social isolation, depression, no lifelines

- NORMAL:**
- a. Close to at least 1 family member, i.e., sees regularly and/or can and does call on them for serious problems
 - b. Happy and content with life at present
 - c. Sees and enjoys other people regularly
 - d. Parent can name more than one lifeline and will actually use them
 - e. Parent has phone and transportation

- MILD:**
- a. Not close to family with no hostility
 - b. Discontent with life but sees this as temporary
 - c. Sees and enjoys other people at least once a week
 - d. Parent can name one lifeline only and will actually use it
 - e. Parent has no phone w/none available and/or no transportation
 - f. Not high school graduate
 - g. Parent expresses difficulty in coping with life stresses
 - h. Late prenatal care

Rate as MILD if two or more apply

- SEVERE:**
- a. Not close to family with hostility
 - b. Very unhappy or depressed with life and sees this as permanent, or does not see immediate end to situation
 - c. Rarely sees other people with little or no enjoyment
 - d. Parent can name no lifeline
 - e. Parent can name a lifeline but will actually use it
 - f. Parent will not "burden" anyone with problems feels has to handle by self
 - g. Parent unable to cope with life stresses

Rate as SEVERE if one or more applies

- h. Hx of childhood abuse/ neglect without resolution
- i. Hx of lifestyle (eg. prostitution) or expressions of low self esteem
- j. No prenatal care

5. Multiple crises or stresses

- NORMAL:
- a. Parent can name nothing that is stressful
 - b. Parents argue occasionally but soon resolve without violence and do not see this as problem (if seen as problem, rate as MILD)
 - c. Finances are not a big problem for family, although they may not have "enough" money

- MILD:
- a. Parents argue frequently without violence and do not see this as problem (if seen as problem, rate as SEVERE)
 - b. Parents argue occasionally without violence but see this as stressful
 - c. Finances are "tight" but parent feels (s)he can "manage"
 - d. Recent loss of loved one who did not serve as lifeline
 - e. Recent change of job, with history of good work stability
 - f. Recent move, but previously in one place more than 1 year
 - g. Living situation seen as inadequate but not stressful by family
 - h. One separation with no current threat of divorce
 - i. Multiple crises with which parent demonstrates good coping and does not feel overwhelmed

Rate as MILD if two or more applies or if one listed under SEVERE applies

5. Multiple crises or stresses (continued)

SEVERE: a.. Parents constantly in conflict with or without violence

b. One parent very afraid of other parent

c. Finances cause much stress to parent

d. Chaotic lifestyle with continual crises which parent feels unable to handle

e. Multiple separations and/or threat of divorce

f. Recent loss of loved one who served as lifeline

g. Frequent job changes

h. Frequent moves

i. Living situation seen as stressful by parents (eg, temporary, overcrowded, conflicts)

j. Any other stress parent mentions which is constantly present in his/her life and with which (s)he is unable to cope or doesn't see hope of escape

Rate as SEVERE if
two or more applies

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6. Violent temper outbursts

- NORMAL**
- a. No violence
 - b. Yelling/screaming/leaving when angry

- MILD:**
- a. Parent throws things when angry, but not at people
 - b. Parent pushes or gives slaps when angry,

Rate as MILD if one or more applies

- SEVERE:**
- a. Parent hits, kicks when angry to leave lasting marks, eg. bruises, black eye
 - b. Parent has history of violent behaviour to others, eg., assault/murder
 - c. Parent throws things at people
 - d. Parent breaks up house in uncontrollable rage
 - e. One parent is afraid of violence in spouse, though no hx of violence

Rate as SEVERE if one or more applies

7. Rigid and unrealistic expectations of child

- NORMAL=**
- a. No information, but shows concern eg, has books, plans to ask doctor
 - b. Expects walking between 9-15 months but will not worry until 15 months or later
 - c. Expects toilet training between 1-1 ½ but will not worry until 2 years
 - d. Will pick up crying baby or expresses concern regarding possible illness
 - e. Shows concern for physical and emotional needs of baby

MILD:

Rate as MILD if one
or more applies

- a. Any expectation of walking earlier than above but without rigidity, i.e., this is not essential to parent
- b. Any expectations of toilet training earlier than above but without rigidity as in "a"
- c. Any expectations of walking/ toilet training unreasonably beyond normal, eg., walking at 4 years (may be indications of parent unwilling to or unable to detect serious development lags)
- d. Worries about spoiling the baby but tolerant of normal annoying behaviour
- e. Will let baby cry for up to ½ hour but expresses concern for needs of baby
- f. Fear of being unsuccessful parent

SEVERE:

Rate as SEVERE if
one or more applies

- a. Any RIGID expectation of walking/ toilet training earlier than above i.e., this is VERY important to parent
- b. Intolerance of normal annoying behaviour or excessively concerned about spoiling
- c. Parent says (s)he or spouse cannot stand crying baby and will become angry with same
- d. Parent expresses NO concern for needs of baby
- e. Parent will not check on or be concerned regarding baby crying longer than ½ hour
- f. Parent was abused as child and sees this as justified or as right way to discipline
- g. Parent feels that infants and children intentionally misbehave out of malice and must be dominated to ensure "respect"
- h. Parent has no information, and has no plans to acquire information

8. Harsh punishment of child

A. For Early Identification purposes, baby up to 2 months:

NORMAL= a. None

MILD: a. Yelling at baby under 2 months

SEVERE= a. Physical punishment of baby prior to crawling

b. Shaking of baby

c. Other dangerous punishment of older children

Rate as SEVERE if
one or more applies

B. For discharge purposes or respite intake child under 5 years:

NORMAL= a. Physical punishment not used, or used as secondary strategy to withdrawal of privileges and "time-out". When child is punished physically, no implements (spoon, paddle, stick) used

MILD: a. Occasional use of physical punishment. Implements used but not in the head or spinal column area and with no bruises or lasting marks

Rate as MILD if one
or more applies

SEVERE: a. Physical punishment alone used for infants, with no restraints as to implement used or duration or severity of blows, bruises or lasting marks

Rate as SEVERE if
one or more applies

9. Child difficult and/or provocative or perceived to be by parents

- NORMAL:
- a. Not present
 - b. Child's behaviour viewed as normal part of growth process

- MILD:
- a. Baby is wakeful, colicky, irritable or so perceived by parents
 - b. Baby seen as sometimes difficult but positives also mentioned

Rate as MILD if one or more applies

- SEVERE:
- a. Baby behaviour seen by parents as provocative, eg, "he wants to make me angry so he cries"
 - b. Baby seen as having no good points
 - c. Baby is constantly difficult, or so perceived by parents
 - d. Baby seen as deserving of physical punishment

Rate as SEVERE if one or more applies

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10. Child unwanted or at risk for poor bonding

- NORMAL=**
- a. Baby is very much wanted, whether planned or unplanned
 - b. Parent displays warmth when talking about baby
 - c.. Child-rearing looked upon as positive life change

- MILD:**
- a. Baby is wanted but is premature
 - b. Parent initially wanted abortion or adoption but now feels positive with changes being made in lifestyle to accommodate new addition to family
 - c. Single parent family
 - d. Prolonged separation of parents leg, longer than one week)

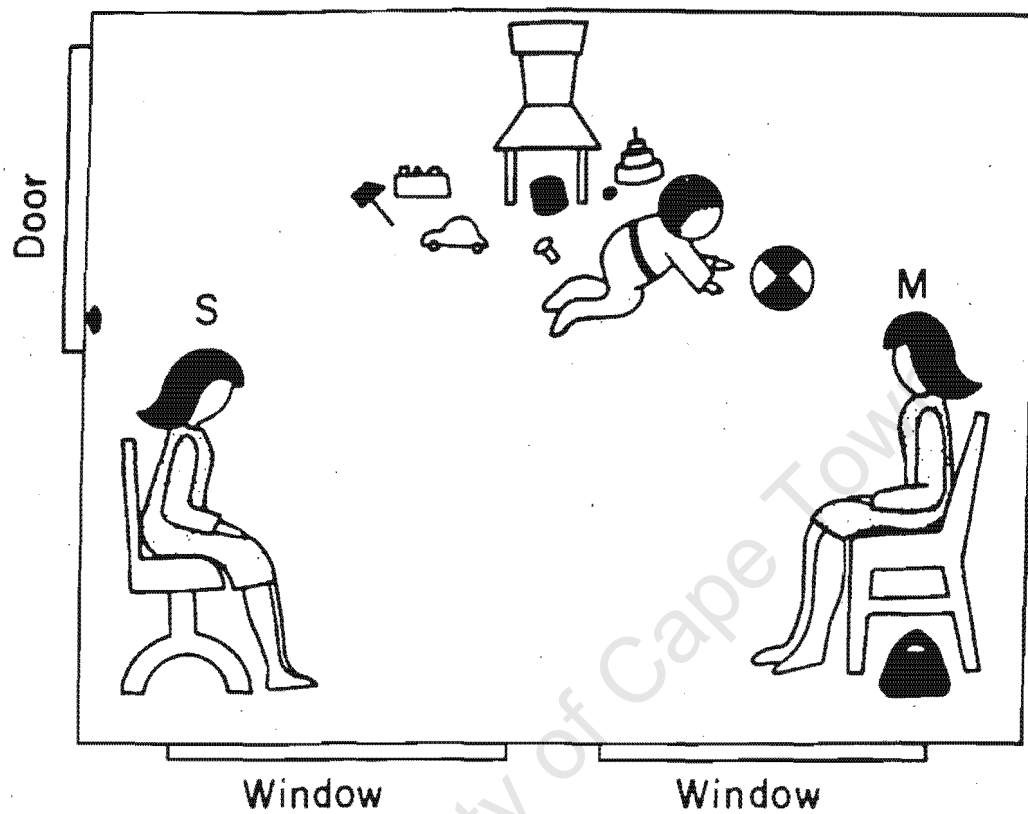
Rate as MILD if one or more applies

- SEVERE:**
- a. Baby is unwanted, eg, not coming at a good time in parent's life and parents unsure if able to handle situation
 - b. Parent is ambivalent about baby
 - c. Baby MUST have certain characteristics if parent is going to love it, eg, certain sex, looks, personality, etc.
 - d. Parent is not natural father of baby, whether or not he states that he wants baby
 - e. Baby seen as burden on lifestyle
 - f. No positive statements made about pregnancy or child rearing
 - g. Attempted abortion/adoption

Rate as SEVERE if one or more applies

APPENDIX FIVE

THE STRANGE SITUATION PHYSICAL SITUATION



S – Stranger; M – mother.

FIG 1: The physical arrangements of the Strange Situation.

(Ainsworth, 1978).

APPENDIX SIX

SCORING SYSTEM FOR INTERACTIVE BEHAVIOURS

PROXIMITY- AND CONTACT-SEEKING BEHAVIOR

This variable deals with the intensity and persistence of the baby's efforts to gain (or to regain) contact with — or, more weakly, proximity to — a person, with the highest scores reserved for behaviour in which the baby both takes initiative in achieving contact and is effective in doing so on his own account. If an episode contains several instances of proximity-seeking behaviour, the episode will be judged in terms of the instance that qualifies for the highest rating, unless otherwise specified below.

- 7 *Very Active Effort and Initiative in Achieving Physical Contact.* The baby purposefully approaches the adult, creeping, crawling, or walking. He goes the whole way and actually achieves the contact through his own efforts, by clambering up on or grasping hold of the adult. The co-operation of the adult is not required. Contact is more than momentary; the baby does not turn away to other things within 15 seconds.

Note: In Episodes 5, 7, and 8 this top score cannot be used if the initial approach (even though it otherwise meets the above criteria) is delayed substantially (i.e., more than 30 seconds). If, however, there is an initial approach or signal for contact without substantial delay, followed later by another approach meeting the above criteria, the episode may be coded 7, even though the initial bid for contact does not qualify for this coding.

- 6 *Active Effort and Initiative in Achieving Physical Contact.* This coding will be used for an approach and/ or clamber showing initiative and active effort that nearly, but not quite, fulfils the specifications for a coding of
- a. The baby purposefully approaches the adult (i.e., he does not merely happen to approach while pursuing a toy). He goes the whole way and then signals by reaching or equivalent behaviour that he wants to be picked up; but he does not clamber up or hold on to make contact entirely on his own initiative. He requires the co-operation of the adult in gaining contact.
 - b. The baby purposefully approaches the adult, going the whole way, and signals his desire to be picked up, but the adult does not co-operate; the adult does not pick him up or hold him, and contact is thus not achieved — provided that the baby make at least two other active bids for contact within the episode, whether these are successful or not.
 - c. In episode 5, 7, or 8 an approach that otherwise would be scored 7, except that it is substantially delayed, is scored 6.

- d. The baby at least three times does a full approach with clamber and/ or brief contact (held only 5 to 15 seconds)-any one of these instances being too brief to qualify for a coding of 6 or 7.
- e. The baby does not begin his approach purposefully, but rather approaches in the course of exploration; finding himself close to the adult, he then completes his approach purposefully, and clambers up or holds on, achieving contact (and holding it for more than 15 seconds) on his own initiative.

8 *Some Active Effort to Achieve Physical Contact.* This score will be given to an active effort to achieve contact that in one way or another does not quite fulfil the specifications of a coding of 6.

- a. The baby approaches purposefully and fully but does not end the approach even with a reach or other signal (except perhaps for a cry), but rather is picked up without any signal beyond the approach itself.
- b. The baby, being held by a stranger, cannot approach his mother through locomotion, but he does the best he can by actively and strongly straining toward her. This straining implies tension involving the whole body and goes beyond mere lifting of arms or a casual reach.
- c. The baby, either because he is at the door already or because he is put down by the stranger close to the mother, is too close to approach, but nevertheless he reaches strongly for the pick-up.
- d. In Episode 5, 7, or 8 the baby, having delayed substantially in making an active effort to regain contact, now makes a full approach ending with a signal that he wishes to be picked up (either a reach or a cry), but requires adult co-operation to achieve contact.
- e. The baby makes at least three active bids for contact (e.g., an approach, a reach, or a "directed cry") at least one of which is a purposeful reach; he may be scored 5 even though he does not complete contact in any of them, presumably because the adult does not co-operate.

1. *Obvious Desire to Achieve Physical Contact, but With Ineffective Effort or Lack of Initiative OR Active Effort to Gain Proximity Without Persisting Toward Contact.* This middle score, as the heading suggests, is for babies who obviously desire contact but show relatively little active effort or initiative in gaining it, and for babies who are competent and effective in their approach behaviour but who are content with minimal contact or with mere proximity.

- a. The baby spontaneously (i.e., before the adult approaches and/or offers her hands or invites him) signals his desire to regain contact by a reach, lean, or "directed cry" as though he expected the adult to pick him up. (A "directed cry" is a signal-like cry — either an isolated cry or a distinct increase of intensity of crying — obviously directed toward the adult; it is to be distinguished from continuous or intermittent crying that expresses distress but does not seem to be emitted as

an attempt to communicate to the adult a specific desire to be picked up and to be picked up now.

- b. The baby begins to approach the adult but goes only part of the distance, and either with or without a further signal waits for the adult, who completes the pick-up. (If, however, the baby goes a substantial part of the distance and presumably would have gone the whole way had he not been approached by the adult simultaneously, this will be counted as a full approach and given a higher score.)
 - c. The baby makes repeated full approaches either without completing contact or with only momentary contact.
 - d. Baby makes a full approach, obviously wanting contact, but the adult does not co-operate and does not pick him up. (See, however, 6b and 5e for specifications of non-reciprocated approaches that may be given higher scores.)
 - e. The baby makes a full approach that ends in contact (either on the baby's initiative or with the adult's co-operation), but he does so only after the adult has invited him to do so by offering her hands or by otherwise coaxing him to come.
- 9 *Weak Effort to Achieve Physical Contact OR Moderately Strong Effort to Gain Proximity.* The baby may display a desire to gain contact but a relatively weak or ineffective effort to implement his desire. Or he may take initiative in approaching the adult in order to interact with her or merely to increase proximity. In the latter case it is quite obvious that the baby does not achieve contact because he does not especially seek it, not because the adult disappoints him by her lack of co-operation.
- a. The baby is distressed, crying, and may be presumed to want contact because he stops crying or at least substantially lulls when he is given contact; but he does not give any specific signal that he wants contact- neither a reach nor an approach nor a "directed cry."
 - b. As above the baby is distressed and crying and does reach, lean, or even slightly crawl to indicate his wish for contact — but only after the adult has begun pick-up or has offered her hands, or after a long delay.
 - c. The baby makes a spontaneous full approach but neither makes contact nor seems to want to so instead he offers a toy or initiates some other kind of interaction, or he seems content with mere proximity.
 - d. The baby makes a spontaneous full approach and either merely touches the adult in an exploratory way or pulls himself into a standing position, giving the clear impression that he is using the adult as he would a chair or other inanimate support and that sustained contact is not the goal. (If,

however, the baby remains steady against the adult, he will be assumed to desire contact even though he seems off-hand about it, and will be given a higher score. Category 3d is only for momentary contact of this sort.)

- e. The baby spontaneously and deliberately signals his desire for contact with a reach (and with no cry) but, in the face of lack of response from the adult, he does not persist in his bid for contact. (The absence of the cry implies a relatively weak desire for contact.)
- f. The baby, having been invited by the adult to approach across a distance, makes a full approach, which ends neither in contact nor with a signal indicating a wish for contact.

2. *Minimal Effort to Achieve Physical Contact or Proximity.*

- a. The baby begins to approach (in a sort of intention movement) but stops, having gone only a short way, and does not follow up this beginning with any further signals of a desire for contact.
- b. The baby seems to be making a full approach, but changes direction to approach something else, or passes beyond the adult for example, to go out the door, to the door, or to explore something beyond the adult, without pause for any kind of interaction en route.
- c. After the adult offers her hands, the baby reaches in an almost automatic gesture. The weakness of desire for contact (with the mother) is underlined by the fact that the baby is not even crying when the invitation is given.

1. *No Effort to Achieve Physical Contact or Proximity.* Episodes will be scored 1 whenever the baby is occupied with play and exploration — or with desperate crying — and pays little attention to the adult. In addition, episodes will be scored 1 in which are displayed the following behaviours, which are considered to indicate no effort (and no real desire) to achieve contact proximity.

- a. The baby merely looks, or smiles, or interacts across a distance without any increase of proximity or any signal indicating that contact is desired.
- b. The baby accepts contact, even being picked up, but merely accepts it. He did not indicate his wish for it by a cry, approach, or reach. Even though he had been crying, he shows that he had no particular desire for contact (and this occurs especially with the stranger) by the fact that he neither diminishes his crying nor hugs, clings, nor holds on.
- c. The baby approaches accidentally in the course of exploration or pursuing a rolling toy, and neither makes contact with the adult nor pauses to interact with her when he comes to her.

CONTACT-MAINTAINING BEHAVIOR

This score deals with the degree of activity and persistence in the baby's efforts to maintain contact with the adult once he has gained it, having either approached her to make contact himself or been picked up either with or without having signalled his desire to be picked up. The relevant episodes for interaction with the mother are 2, 3, 5, and 8. The relevant episodes for the stranger are 3, 4, and 7 — and, in a few instances, also 8.

Although the baby's behaviour is the focus of attention here, it must be viewed within the context of interaction with the adult. Because the adults, as well as the babies, differ in the extent to which they initiate or accept contact, each of the score points has several alternatives, in an attempt to encompass a variety of contingencies.

7. *Very Active and Persistent Effort to Maintain Physical Contact.*

- a. The baby, in the course of contact lasting over 2 minutes, shows at least two instances of active resistance to release or to cessation of contact- and indeed these efforts are in part responsible for the long period of contact. These efforts include clinging when the adult shifts his position in her arms or attempts to put him down, turning to clutch the adult or to clamber up on her again soon after being put down, or turning to the adult to make closer contact.
- b. The adult holds the baby for 2 minutes or more, but does not attempt to release him. The baby, meanwhile, embraces the adult, or sinks in, or reclines against her in a relaxed manner, or otherwise clings to her.
- c. The baby initiates contact and remains in contact (e.g., standing holding on to the mother's knee) for over 2 minutes and in addition shows at least two instances of active resistance to cessation of contact.

6. *Active and Fairly Persistent Effort to Maintain Physical Contact.*

- a. The baby, in the course of contact lasting between 1 and 2 minutes, shows at least one instance of active resistance to release (e.g., by clinging, clambering up, etc.). For the rest of the period of contact, he may be more passive, but even then he shows his desire for contact by sinking in, holding on, or reclining against the adult.
- b. The baby, having spontaneously approached the adult, sustains contact for longer than 1 minute, and shows at least one active clambering or resisting cessation of contact after the initial behaviour

that made the contact.

- c. The baby, in the course of contact lasting longer than 2 minutes, clings or, if an attempt is made to release him, actively resists it; but when finally put down, he merely cries and makes no active effort to regain contact.

5. *Some Active Effort to Maintain Physical Contact.*

- a. The baby, in the course of contact lasting for less than a minute, shows one marked instance of resistance to release (clinging on attempted release, clambering up after being put down, turning to the adult to make closer contact), which, as it turns out, does result in maintaining contact or at least in delaying the release.
- b. *Or*, he shows two instances of active behaviour of this sort, neither of which results in more than brief contact.
- c. *Or*, having actively initiated contact by clambering up (or some similarly active behaviour), he resists release once even though this may not be a marked instance of resistance.
- d. The baby is held by the mother for more than a minute; the baby may be crying and/ or clinging, but he makes no active effort to resist release or to clamber up again after being put down — although he may perhaps reach a little. The point here is that the baby shows his desire for contact by clinging or by diminishing crying, but the adult's response to his behaviour (continued holding) gives him no opportunity to demonstrate more active behaviour in maintaining physical contact, at least not until after the contact has been long enough for him to be thoroughly comforted.
- e. *Or*, the baby is held for less than a minute, clinging markedly, and protests strongly when put down, even though he may not actively attempt to clamber up or to clutch at the adult in resistance to release.

Obvious Desire to Maintain Physical Contact but Relatively Little Active Effort to Do So.

- a. The baby has been held, perhaps clinging a little, perhaps having diminished his crying when picked up; when put down he decisively protests, giving more than a brief cry.
- b. The baby was picked up when he was quite distressed; although he seems not to have been truly comforted by the contact, nevertheless he shows his desire to maintain contact by clinging markedly.
- c. The baby, having been picked up when crying, quiets, perhaps with some clinging; after being held for less than 1 minute, he is put down; he either makes no protest, or the protest is both considerably delayed and minimal. He may, however, signal briefly by reaching that he would like to maintain contact, but he makes no more effective effort than this to do so.

- d. The baby, having been held, is released; he resists release briefly, by attempting to hold on or by clinging briefly, but when this is ineffective he accepts the release without protest and without further effort to maintain contact.

Some Apparent Desire to Maintain Physical Contact but Relatively Little Active Effort to Do So.

- a. The baby initiates contact twice or more during the episode — by approaching and by touching or by clambering up — but each contact is held only briefly and then broken either by the baby himself or by the adult, with no protest or resistance from the baby.
- b. The baby initiates contact once during the episode and shows some additional active attachment behaviour (beyond that necessary to achieve contact — e.g., clutching, burying the face, reclining against the adult), but does not persist in the contact for more than a few moments, and spontaneously breaks away.
- c. The adult initiates the contact, picking the baby up or holding him, with perhaps a signal from the baby (cry or reach); the baby accepts the contact but does not cling; when he is put down he protests briefly with a cry (not merely with an unhappy noise or cry face).
- d. The adult initiates the contact, perhaps after a signal from the baby; the contact persists for a minute or more; the baby accepts the contact passively and gives the impression of liking it; but when he is put down he makes no protest.

2. Physical Contact, but Apparently Little Effort or Desire to Maintain It.

- a. The baby initiates contact no more than once during the episode, and either breaks it off himself after a few seconds, or, if the adult makes the break, makes no effort to maintain the contact.
- b. The adult initiates contact, and the baby either accepts it briefly and then breaks it or gives a brief, minimal protest (unhappy noise or cry face) when put down.
- c. The adult picks up the baby, who is very distressed; the baby accepts the contact, but, although his crying may diminish, he is not really comforted. When he is put down, he cries and may cry more intensely, but this does not seem so much a definite protest against the cessation of contact as a response to the whole distressing situation. The point is, however, that even though he is very distressed, he seems somewhat less distressed when in contact with the adult than when he is not.

1. Either No Physical Contact or No Effort to Maintain It.

- a. The baby is not held or touched.

- b. Or, if picked up, he neither clings nor holds on, and when he is put down he makes no protest; if he is not put down he may still be coded 1 if he seems indifferent to being held. Furthermore, he has taken no initiative in making the contact in the first place.

RESISTANT BEHAVIOR

This variable deals with the intensity and frequency or duration of resistant behaviour evoked by the person who comes into contact with or proximity to the baby, or who attempts to initiate interaction or to involve him in play. The mood is angry — pouting, petulance, cranky fussing, angry distress, or full blown temper tantrums. The relevant behaviours are: pushing away, throwing away, dropping, batting away, hitting, kicking, squirming to be put down, jerking away, stepping angrily, and resistance to being picked up or moved or restrained. More diffuse manifestations are: angry screaming, throwing self about, throwing self down, kicking the floor, pouting, cranky fussing and petulance. These behaviours may alternate with active efforts to achieve or maintain contact with (or proximity to) the person who is being rejected. If both kinds of behaviour are marked, the baby's behaviour could be scored high in both variables.

One is reminded of the "weaning tantrums" of infant monkeys. The implication is that the baby rejects his mother, being angry with her for having left (rejected, abandoned) him. Often enough it is clear that he rejects toys that are offered to him as a redirection of rejection of or anger toward the person who offers them. It seems likely that the rejection of the stranger is either a redirection of anger at the mother or anger at the stranger because she is not the mother. This latter point raises the question of distinguishing "fear" of strangers from this kind of rejection. For the sake of consistency, all instances of resistance to the stranger have been included in this scale, including clear protest at the entrance of the stranger (in Episode 7), or her approach, or her attempt to make contact. Similar protests at the return or approach of the mother are also included here.

5. *Very Intense and Persistent Resistance.* The baby shows two or more of the following behaviours in the episode being coded:
- a. Repeated hitting of the person, or other similar directed aggressive behaviour;
 - b. Strong resistance to being held, shown by pushing away strongly, struggling, or strongly squirming to be put down;
 - c. A full-blown temper tantrum, with angry screaming — the baby either being rigid and stiff or throwing himself about, kicking the floor, batting his hands up and down, and the like;
 - d. Angry resistance to attempts of the adult to control the baby's posture, location, or action;

- e. Strong and repeated pushing away, throwing down, or hitting at toys offered to him.
6. *Intense and/or Persistent Resistance*. Any one of the following behaviours:
- a. Repeated or persistent temper tantrum, with throwing self about, kicking, and/or rigid, stiff, angry screaming;
 - b. Very strong and/or persistent struggle against being held;
 - c. Definite and repeated rejection of the person, even in the absence of directed aggression or angry screaming;
 - d. Repeated, strong rejection of toys — pushing away, throwing down accompanied by an angry cry or fuss;
 - e. A combination of less intense manifestations of resistance, including squirming to be put down, resistance to interference, refusal of contact, rejection of toys, and petulance.
- 10 *Some Resistance, Either Less Intense, or, if Intense, More Isolated and Less Persistent Than the Above*. Any one of the following:
- a. Repeated rejection of toys (e.g., dropping or throwing down) but with no strong pushing away or batting away. The rejection does not seem as angry as in scores of 6 or 7. At least three such behaviours.
 - b. Persistent resistance to the adult when she seeks interaction — but without the intensity of struggling, pushing away, hitting, and so on of the higher scores. An example would be a fuss or increased intensity of crying whenever the adult approaches, offers a toy, and the like.
 - c. Resistance to being held by the mother, shown by squirming immediately to be put down, but without the Intense struggle implied in the higher scores.
 - d. Persistent low-intensity pouting or cranky fussing, with at least one other manifestation of rejection, such as protesting interference, rejection of a toy, and the like.
2. *Isolated but Definite Instances of Resistance in the Absence of a Pervasive Angry Mood*. Any one of the following:
- a. Refusal of contact with the stranger. One definite, initial refusal, but without any implications of intense struggle.
 - b. Two refusals of toy, or kicking movements, or resistance to interference, accompanied by a cry, but without any other manifestations of rejection or angry mood.
 - c. One strong but isolated behaviour, accompanied by a cry — for example, angry stepping when put down, one strong refusal of toy (strong push or batting away), stiff steps when approaching

(as though showing bodily resistance), and the like.

- d. One manifestation of resistance to being held by the mother, less definite than above for example, a slight jerk or push away in the context of apparent "wanting to be held," or a definite squirm to be put down after accepting contact for at least 15 seconds.
3. *Slight Resistance*. Any one of the following:
 - a. Two instances of resistant (or aggressive) behaviour that is neither intense nor strong and is not accompanied by crying — for example, little kicks of the feet, dropping toys, and the like.
 - b. One instance of resistant (or aggressive) behaviour if accompanied by a pout or protest, or in itself fairly intense (and yet not covered by higher scoring categories).
 - c. A marked pout, not prolonged enough to warrant a score of 5 and not accompanied by other manifestations of resistance or aggression.
 2. *Very Slight Resistance*. Any one of the following, with no other manifestations of resistance:
 - a. One isolated instance of non-intense resistance for example, a little kick of the legs when being picked up.
 - b. One brief, slight protest noise when the adult enters, or advances, or picks the baby up.
 1. *No Resistance*. None of the above behaviours. The baby either accepts or is unresponsive to proximity, contact, or interaction offered by the adult — or he may merely avoid it. He may be occupied with other things, or he may be crying and not increase the intensity of his cry when approached by the adult. Note: Because babies nearly always resist having their noses wiped, such behaviour will not be scored as resistant.

AVOIDANT BEHAVIOR

This variable deals with the intensity, persistence, duration, and promptness of the baby's avoidance of proximity and of interaction even across a distance. The relevant behaviours are: increasing distance between self and the person, whether through locomotion or by leaning away from; turning the back on the person; turning the head away; averting the gaze; avoidance of meeting the person's eyes; hiding the face; or simply ignoring the person. Ignoring the person does not refer, however, to mere exploration of the environment, especially in Episodes 2 and 3. Ignoring or avoiding the person is most marked when she is trying to gain the attention of the baby or to get a response from him. It also may be considered avoidance if the baby ignores the mother's entrance to the room after an

absence, whether or not she seeks a response from him, or if he does not respond to the entrance of the stranger or to her attempt to engage him in play or interaction.

This variable deals chiefly with interaction across a distance, whereas the resistance variable is concerned with interaction in contact or in close proximity. The two sets of behaviours are usually easy to distinguish, because resistance is so frequently tinged with anger or aggressive movement, while avoidance seems either to be neutral in tone or perhaps to reflect apprehension. The more neutral the tone of the avoidance, however, the more likely it seems to be defensive in character — a defence that hides feelings, perhaps including those of resentment.

Although in the case of the other variables, behaviour in interaction with mother or stranger could be comprehended in the same categories, in this coding it seems necessary to distinguish between mother and stranger.

7. *Very Marked and Persistent Avoidance.*

Of mother: The baby does not greet the mother upon her return in a reunion episode (episode 5 or 8), neither with a smile nor with a protest. He pays little or no attention to her for an extended period despite the mother's efforts to attract his attention. He ignores her, and may turn his back to her. If his mother nevertheless picks him up, he remains unresponsive to her while she holds him, looking around, seemingly interested in other things.

Of stranger: The baby repeatedly and persistently avoids the stranger, by some kind of strong behaviour, either locomotor withdrawal or hiding the face, perhaps combined with looking away. In Episode 3 the baby may go to his mother in his repeated withdrawals from the stranger.

3. *Marked and Persistent Avoidance.*

Of mother:

- (a) The baby behaves as above, giving the mother no greeting, except perhaps an initial look, and paying little or no attention to her for an extended period; but in this case the mother does not persist in her attempt to gain the baby's attention she merely greets him and then sits quietly. Or
- (b) the baby greets his mother, perhaps with a smile or a fuss or with a partial approach, and then behaves as above, paying little or no attention to the mother for an extended period, despite the mother's efforts to attract his attention.

Of stranger:

This score is reserved for an episode in which the end of the episode comes before it is confirmed that the baby's avoidance would have been repeated and persistent. The baby strongly withdraws from the stranger with behaviour and in a context that makes it seem very probable that the avoidance would have been persistent had the episode not ended.

*Clear-Cut Avoidance But Less Persistent.**Of mother:*

- a. The baby may look, but gives the mother no greeting, then looks away, or turns away and ignores the mother for about 30 seconds, during which time the mother makes no special effort to gain his attention; then he looks again and seems more responsive to her, but he does not seek contact and may even avoid it if it is offered.
- b. The baby gives the mother no greeting; the mother strives to gain his attention; after about 15 seconds he gives her his attention but he is fairly unresponsive even then.
- c. The baby greets his mother or starts to approach her, but then he either markedly turns away (or looks away) or tries to go past her out the door; he ignores her efforts to gain his attention for an appreciable time, although he may then respond by approaching, reaching, or accepting a toy.

Of stranger:

The baby repeatedly and persistently avoids the stranger, but without the intensity of the avoidance implicit in a coding of 7. In Episode 3 the baby may retreat to his mother, but without apparent intense anxiety, and then later show some other clear-cut manifestation of avoidance of the stranger.

Regardless of the episode, the baby clearly does not want to have anything to do with the stranger — neither contact nor interaction — but his efforts to avoid her do not have the frantic persistence of those coded 7.

*Brief But Clear-Cut Avoidance OR Persistent Low-Keyed Avoidance**Of mother:*

- a. The baby greets his mother or starts to approach her; he then clearly turns away or looks away as in 5c. In this instance, however, the mother goes to her chair and sits, without making any effort to elicit responsiveness in the baby. The baby goes on playing, perhaps with occasional looks and smiles at the mother; both behave (in a reunion episode) much as the average couple in Episode 2.

In view of the mother's lack of participation, one can be justified in counting only the initial avoidance behaviour (i.e., that following greeting) as avoidance on the baby's part. It is assumed that he is not ignoring his mother and that he would approach her or respond to her if given a cue.

- b. The baby at first "snubs" the mother by failing to greet her and either by being slow to look at her or by looking away or both (or perhaps by trying to go out the door); but after this initial avoidance behaviour, the baby responds by reaching to the mother's outstretched hands and/or by regaining responsiveness after being picked up.
- c. The baby fails to greet his mother and ignores her for a time (15 to 30 seconds) and then takes the initiative in making contact or undertaking interaction, even though the mother has not sought his attention.

Of stranger:

- a. The baby shows one clear-cut avoidance or several slight ones, but at least looks at the stranger and at what she is doing for part of the episode, even though there is no positive response to her.
- b. The baby persistently avoids meeting the stranger's eyes with his. He may watch her, but as soon as she looks at him he averts his gaze; but there is no stronger instance of avoidance than this.

Slight, Isolated Avoidance Behaviour.

Of mother:

- a. The baby is distressed and is slow either in looking at his mother or in responding to her overtures but then he does, either crying more loudly or reaching or both.
- b. The baby is not distressed; he looks up at his mother when she arrives, perhaps greeting her, then looks away briefly; then he is responsive, either interacting with her or exchanging looks and smiles in the course of play. He does not, however, take the initiative in seeking contact.

Of stranger:

- a. In Episode 3 the baby at one point retreats from the stranger to his mother, but without apparent anxiety. He does not approach the stranger, but on the other hand he does not further avoid the stranger's advances in this episode.

- b. One isolated but clear-cut instance of avoidance of the stranger, by twisting away, turning away, or moving back a little; but for the rest of the episode the baby accepts the stranger's advances and may be fairly friendly, or, if the episode ends soon, there is no implication that the avoidance will be persistent.

2. *Very Slight Avoidance.*

Of mother:

The baby may delay very briefly in responding to his mother's return or may give her a brief snub by looking away, but very soon he takes the initiative in seeking contact or interaction with or proximity to her.

Of stranger:

One slight instance of avoidance of the stranger. The baby who is not distressed (because of separation) may look away coyly or turn away momentarily as the stranger approaches, or perhaps he may seem to avoid her eyes for a while. The baby who is distressed by separation may not be responsive to the stranger, but he shows only one slight instance of avoidance — looking away or moving his hands away.

1. *No Avoidance.*

Of mother:

The baby responds appropriately to his mother and to her behaviour, neither avoiding her overtures nor ignoring her return after an absence. In Episode 2, however, he may be quite preoccupied with exploration while she sits quietly; and in Episode 3, he may be absorbed either with continuing exploratory play or with staring at the stranger.

Of stranger:

The baby may be friendly with the stranger. He may be too distressed by his mother's absence to be friendly. He may angrily resist the stranger or the toy she offers. He may continue playing, paying little spontaneous attention to the stranger. But he does not avoid the stranger, and he at least watches her when she tries to interest him in toys.

SEARCH BEHAVIOR DURING THE SEPARATION EPISODES

This variable deals with the degree of activity and persistence of behaviour that may be interpreted as an attempt to search for and to regain the mother during the episodes when she

is absent from the room. Of these behaviours the most obviously appropriate, even though necessarily ineffective, is following the mother to the door and trying to open it. The efforts to open it or to get someone to open it include trying to insert the fingers in the crack of the door or under it, trying to reach the knob or looking up at the knob, which is beyond reach, or banging on the door. Also relevant to a desire to regain the mother is merely looking at the door or at the mother's chair or handbag, or going to one of these locations associated with the mother and remaining oriented to it for longer or shorter periods of time. Crying may also be interpreted as behaviour that signals the baby's desire for his mother to return; but it is not included in the present scoring system, but rather it is dealt with in a separate analysis.

4. *Very Active and Persistent Search Behaviour.* The baby goes to the door without substantial delay (within 45 seconds). He either tries to open it, or reaches for the knob, or bangs on the door. Either he remains at the door and oriented to it for 30 seconds or more after his initial effort to open it, or he returns again to the door after leaving it.

11 *Active and Persistent Search Behaviour.* Any one of the following:

- a. The baby goes promptly to the door and stays there persistently. He either looks up at the knob or touches the door, but he does not try to open it, reach for the knob, or bang on the door. Even though he may be crying hard, he remains oriented to the door.
- b. The baby delays in going to the door (i.e., for over 45 seconds) but then tries to open it or reaches for the knob or bangs on the door; he remains at the door for 30 seconds or more or returns to the door after leaving it (i.e., the same behaviour that is scored 7, except for the initial delay). The baby makes an active effort to reach the door but is prevented from actually reaching it or from staying there, either because he is picked up and held by the stranger or because the episode is curtailed. It is assumed that he would have displayed 6a behaviour had the intervention not occurred.
- c. The baby repeatedly goes to the door and touches it at least once, although he neither tries to open it nor remains near the door for an extended time.

5. *Some Active Search.* Any one of the following:

- a. The baby goes to the door across a fair distance (i.e., he is not already within a couple of steps of the door); but, either because of delay or because of absence of active effort to open the door or because he does not remain near the door and oriented to it, his behaviour cannot be scored 6 or 7.

- b. In Episode 7 the baby is at the door when the stranger enters, and he tries to go out the door and/or helps to open the door.
- c. The baby struggles hard to go to the door, but he is so distressed that his locomotion is too inefficient for him to be able to get to the door.
- d. The baby is held by the stranger and therefore cannot go to the door, but nevertheless he strongly and persistently leans or reaches toward the door out of the stranger's arms.

Obvious Desire to Regain the Mother, But the "Search " Behaviour is Incomplete or Weak.

- a. The baby displays five or more instances of "weak" search behaviour- for example, looking at the door, looking at the mother's chair, or going to the mother's chair or to her handbag.
- b. The baby begins to approach the door but goes only part way.
- b. The baby is near the door and goes the whole way to the door, but he does not touch the door and he does not remain there for more than a few seconds.
- c. The baby goes to the mother's chair in a purposeful way (i.e., he does not merely happen to get there in pursuit of a toy or in the course of exploration); in addition he shows one other instance of weak search behaviour.

Some Apparent Desire to Regain the Mother, But the Search Behaviour is Weak.

- a. The baby displays three or four instances of "weak" search behaviour, as defined above.
 - c. The baby looks at the door and continues doing so for at least 30 seconds or for all of a curtail episode of less than 30 seconds.
 - d. The baby goes to the mother's chair in a purposeful way; this is the only instance of search behaviour he displays.
2. *Very Slight Effort to Search for the Mother.* The baby displays only one or two instances of weak search behaviour, which includes looking at the door, looking at the mother's chair or handbag, or making a mere intention movement toward the door (e.g., taking one or two steps toward the door when at a distance from it), or going to the mother's chair in such a way that it is doubtful whether the approach was purposeful.
1. *No Search for the Mother.* Episodes will be scored I whenever the baby does not go to or look at the door and does not go to or look at the mother's chair or handbag. He may, however, show any one of the following behaviours that are not identified as search behaviour: watching the mother leave and continuing to look at the door for a few

seconds after it has closed; in Episode 4 looking at the mother's chair as the first perception of her absence (i.e., the baby has not seen the mother leave the room); looking at the door at the very end of a separation episode, in probable response to hearing a person outside and about to enter. In other words, "search behaviour" occurs after the baby perceives his mother's departure or absence and before the mother (or stranger) gives an auditory cue of her impending entrance.

DISTANCE INTERACTION

This variable deals with positive social behaviours — smiling, vocalising, intent looking, showing of toy, and play — that indicate that a baby is interested in the adult, although he may not be in close proximity to her. The term "distance interaction" is defined to include behaviours that can occur across the room from the adult or in the course of a partial approach to her, but not those that occur immediately preceding or during a full approach.

In the scoring and in defining distance interaction, distinction has been made between mother and stranger in some cases. Interaction that occurs between mother and infant in Episodes 2, 5, and 8 and is instigated by the mother upon instructions to engage or reengage the baby in play is not scored as distance interaction, because it is not spontaneous and because it occurs when mother and infant are in close proximity. (Otherwise, contingencies of both maternal and infant behaviour have been taken into account in the coding.) On the other hand, the responses to the stranger's systematic approaches in Episode 3 have been coded as distance interaction, for it is of interest to note how readily and enthusiastically the baby accepts and responds to the social overtures of an unfamiliar person.

Separate provision has also been made for distance interaction that may occur immediately following reunion with the mother in Episodes 5 and 8.

6. Very Active and Persistent Distance Interaction.

- a. The baby and the adult establish a reciprocal interaction that lasts for 45 seconds or longer; or they establish briefer reciprocal interactions twice in the course of the episode.
- b. The baby offers or shows a toy to the adult two or more times in the course of the episode, although he does not seek proximity to her in order to do so.
- c. The baby appears to pause and attend to what the adult is saying for 45 seconds or more; or he does so twice in the course of the episode for briefer periods. This is reported as

attending by the observers, and is clearly more than mere occasional looking at the adult when she speaks.

Reunions only. The baby does not make an immediate approach to his mother, but he greets her within 15 seconds by smiling, showing a toy, or vocalising; and he is responsive to her in the course of the episode. That is, he smiles and vocalises to her and engages in a reciprocal interaction with her at least once in the course of the episode.

7. *Very Active and Fairly Persistent Distance Interaction.* The baby engages in a reciprocal interaction, briefer than the above. He pushes a toy back and forth to the adult in play, or he takes a toy and gestures to the adult about it. Or he engages in a brief reciprocal vocalisation or smiling exchange.

Reunions only. The baby does not make an immediate full approach to his mother, but he greets her within 15 seconds with a smile, a show of a toy, or a vocalisation and is responsive to her in the course of the episode. He smiles and vocalises to her five or more times, or he may offer the mother a toy or otherwise attempt to communicate with her about his environment. However, no reciprocal interaction occurs.

5. *Active Distance Interaction.*

Mother. The baby smiles and vocalises to his mother four or more times in the course of the episode.

Reunions only. The baby does not make an immediate full approach to his mother but instead greets her within 15 seconds with a smile, a show of a toy, or a vocalisation; he makes other distal bids (smiles, vocalisations, showing a toy) three or four other times in the course of the episode.

Stranger. The baby takes a toy directly from the stranger and offers her a toy once in the course of the episode; or he indicates a toy to her by pointing or trying to communicate to her about it.

Moderate Distance Interaction.

Mother:

a. The baby smiles or vocalises to his mother two or three times in the course of the episode.

- c. The baby gestures about a toy or points out something in the room to his mother once in the course of the episode.

Reunions only. The baby does not make an immediate full approach to his mother, but greets her with a smile or a vocalisation within 15 seconds, and also smiles or vocalises to her twice subsequently in the course of the episode.

Stranger:

- a. The baby accepts more or less readily a toy that the stranger offers, perhaps smiling at her; but he shows no tendency to reciprocate by engaging her in further play.
- b. The baby vocalises and/ or smiles to the stranger three times during the episode.

2. *Little Distance Interaction:*

Mother:

- a. The baby looks at the mother frequently in the course of his exploration (these are described as more than glances or very brief looks); and he orients to her for more than 15 seconds at least once during the episode, perhaps smiling at her.
- b. The mother initiates an interaction across the distance with the baby by smiling at or vocalising to the baby, and she receives a smile or two in the course of the episode. But the baby takes no initiative in interactive bids during the episode.

Reunions only:

- a. The baby may smile at his mother when she enters initially, and he may be happy to see her; but he does not make an immediate full approach. Either because he later achieves contact or because he glances at his mother, or vocalises to her only once in the course of the ensuing episode, he does not get a higher score.
- b. The baby greets his mother with a smile upon reunion, but he shows no tendency to seek her proximity. However, the mother picks him up. Because one can infer that he would have made more distal bids had the mother not intervened, the baby receives this score.

Stranger:

- a. If the stranger approaches the baby, he may look at her attentively, as well as at the toy that she is offering. However, he does not directly take the toy that she brings, although he may make an "intention movement" toward it. This score is different from a score of 2 because, in this case, the baby is obviously more directly interested in the stranger.

- b. The baby smiles at and/or vocalises to the stranger twice in the course of the episode.

3. *Very Little Distance Interaction.*

Mother:

The baby glances at the mother four or more times in the course of the episode, and he might vocalise to and/or smile to her once; but he engages in no more active type of distance interaction.

Reunions only:

The baby does not make an immediate full approach. He may look at his mother initially, twisting around briefly to see her, and he may be described as having a pleasant expression on his face. If he is not picked up, he may occasionally look at her (five or fewer times), but he engages in no more active types of behaviour.

Stranger:

- a. The baby may pause and stare at the stranger with obvious curiosity, or he may glance at her frequently (five or more times). But beyond this, he shows no tendency to engage her socially.
- b. If the stranger offers the baby a toy, he may focus his attention on it, perhaps making a slight intention movement toward it; or he may pick it up after the stranger has put it down. Hence he is interacting with her indirectly, but he gives her no more direct attention than a few brief glances.

1. *No Distance Interaction.*

Mother and Stranger:

- a. The baby makes no bids for distance interaction with the adult. He may glance briefly at her (two or three times); or if she attempts to engage his attention, he may look at her at least part of the time. However, he shows no further tendency to interact with her.
- b. The baby may be distressed and may seek proximity to and/ or contact with the adult. He may look at the adult a few times before approaching, but he seems to want physical closeness. Although he may be highly responsive to the adult while in contact or while standing by her chair, he shows no desire to increase the distance between them.

Stranger:

- a. The baby is distressed when the stranger approaches. He may accept her or prefer to ignore her. He may look briefly at a toy that she offers, but he is completely unwilling to become involved with it. Note: If the baby responds positively to what the stranger is doing for at least part of the time, he receives a higher score than 1.
- b. The stranger does not approach the baby. He confines himself to giving her a few brief glances that do not linger on her face and that are not meant to evoke a social response from her; or he gives her one or two more prolonged looks with no interactive tendencies.

**As you have recently had a baby,
we would like to know how you are feeling.**

Please UNDERLINE the answer which comes closest to how you have felt **IN THE PAST 7 DAYS** — not just how you feel today.

Here is an example, already completed —

I have felt happy

- Yes, all the time
 Yes, most of the time
 No, not very often
 No, not at all

This would mean: *"I have felt happy most of the time" during the past week.*

Please complete the following 10 questions in the same way:

IN THE PAST 7 DAYS ...

1. I have been able to laugh and see the funny side of things

- As much as I always could
 Not quite so much now
 Definitely not so much now
 Not at all

2. I have looked forward, with enjoyment, to things

- As much as I ever did
 Rather less than I used to
 Definitely less than I used to
 Hardly at all

3. I have blamed myself, unnecessarily, when things went wrong

- Yes, most of the time
 Yes, some of the time
 Not very often
 No, never

4. I have been anxious or worried for no very good reason

- No, not at all
 Hardly ever
 Yes, sometimes
 Yes, very often

5. I have felt scared or panicky for no very good reason

- Yes, quite a lot
 Yes, sometimes
 No, not much
 No, not at all

6. Things have been getting on top of me

- Yes, most of the time I haven't been able to cope at all
 Yes, sometimes I haven't been coping as well as usual
 No, most of the time I have coped quite well
 No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping

- Yes, most of the time
 Yes, sometimes
 Not very often
 No, not at all

8. I have felt sad or miserable

- Yes, most of the time
 Yes, quite often
 Not very often
 No, not at all

9. I have been so unhappy that I have been crying

- Yes, most of the time
 Yes, quite often
 Only occasionally
 No, never

10. The thought of harming myself has occurred to me

- Yes, quite often
 Sometimes
 Hardly ever
 Never

Questions 1, 2 and 4 Score: 0, 1, 2, 3.

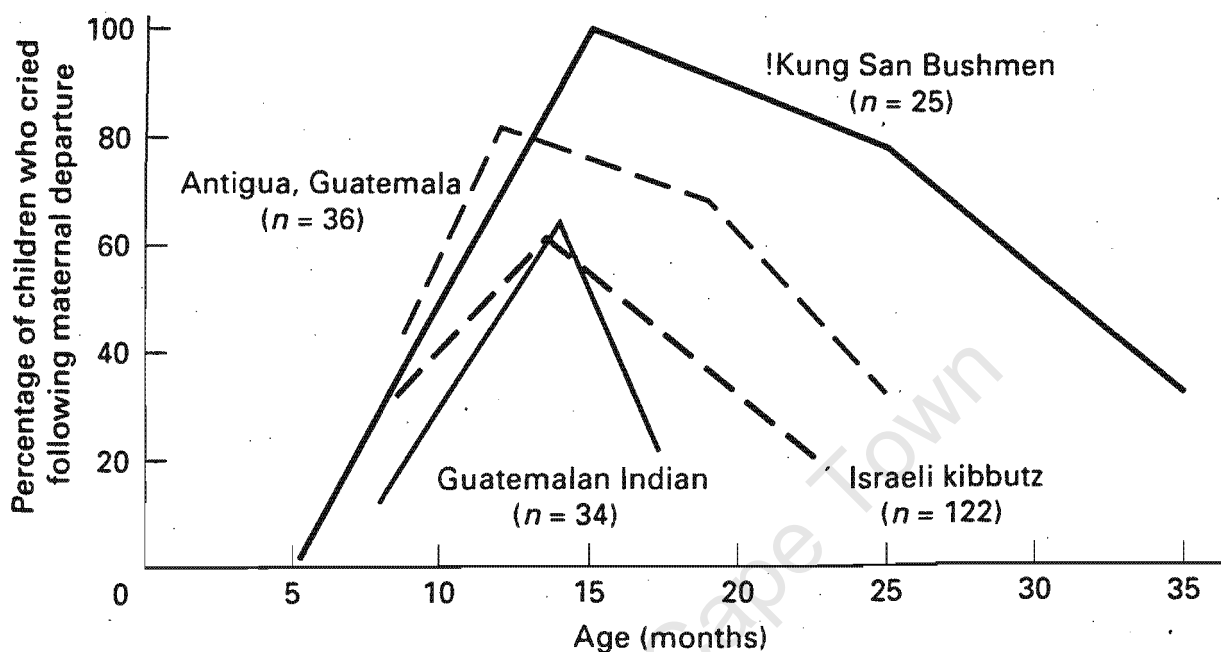
Questions 3, 5, 7, 8, 9, 10 Score: 3, 2, 1, 0.

TOTAL SCORE:

APPENDIX NINE

CULTURAL VARIATION IN SEPARATION ANXIETY

Proportion of Children Showing Separation Anxiety in Various Cultures



Kagan, J., Kearsley, R., & Zelazo, P. (1978) as quoted by Krantz, M. (1994).

Papousek and Papousek (1984) in quoting the research of Konner (1982) who studied the !Kung San hunter-gatherers of the Kalahari Desert in Botswana, argue that Bowlby's concept of maternal bonding in order to protect progeny from predation is too narrow. Konner (1982 as quoted by Papousek and Papousek (1984)) indicated the nursing patterns of !Kung San mothers who nurse their children up to two or three years old, and often do it so often in the first two years, that the average intervals are shorter than fifteen minutes. The resultant birth spacing is around forty-four months (Papousek and Papousek, 1984). Only late in the second year of life do !Kung San children separate from their mother in order to play.

Konner is arguing that more selective pressures (other than simply protection from predation) may have played a role in evolution of maternal bonding.

Consequently, birth spacing and demographic propagation should be regarded as additional factors closely interrelated with the evolution of maternal bonding

(Papousek and Papousek, 1984, p.278).

APPENDIX TEN

HOME OBSERVATION

Howrigan (1988) argues that the HOME presents a number of difficulties as a measure of parent-infant interaction (p.115). In the first instance questions need to be asked about the extent to which a one hour assessment in the home actually represents a naturalistic slice of the interaction of parent and child, and in what way does the presence of the observer interfere with 'normal' interaction patterns.

Furthermore, the HOME is limited to the extent that it is dependent on the child supplying the stimulus for the caregiver's response. "Given current conceptual emphasis on the child's contribution to interaction, direct assessment of the child's behaviour is preferable" (Howrigan, 1988, p.115).

A further difficulty (and one of particular relevance in Hanover Park and Khayelitsha) is the emphasis it places on the provision of objects, such as books and toys, and on the living arrangements – and in this case largely derived from middle class households (Howrigan, 1988).

APPENDIX ELEVEN

PARENT CENTRE OUTLINE OF PROJECT

ph 61-9142/3

parent education and counselling
a project of the child welfare society cape town

31 EDEN ROAD,
7700 CLAREMONT

APPLICATION FOR FUNDING FOR RESEARCH INTO A PREVENTIVE
NEONATAL HOME VISITING PROGRAMME FOR FAMILIES AT RISK OF
CHILD ABUSE AND NEGLECT.

DEFINITION OF THE PROBLEM.

We are aware of the the devastating effects that trauma and distress in the early years has on children's later emotional, physical, social and intellectual development and ability to cope effectively in adulthood.

Statistics from the Child Welfare Office in Athlone, which serves the Hanover Park community, show that in March 1993, 47 case of neglect, 8 cases of physical abuse and 5 cases of sexual abuse were reported and 9 children needed to be removed following a Children's Court enquiry. This does not take into account the children who suffer the effects of emotional abuse daily.

While great sums of money are poured into services required to protect children from child abuse, the problem continues to grow. It clearly makes more sense to look into the development of services and practices that prevent abuse from occurring from the earliest possible stage.

We have always been strongly committed to the belief and find increasing support from the research that the single most effective strategy for preventing abuse in families is to provide support and information to parents from the time of birth. This nurturing of new parents both builds and maintains their self-esteem thus enabling them in turn to give the necessary nurturing to their children and respond more effectively to their emotional, health, intellectual and physical needs.

PROJECT.

The project aims to replicate the very successful child abuse and neglect prevention programme developed in Hawaii in 1985 known as "Healthy Start" and later expanded to "Healthy Families America".

PHASE 1.

The first phase will comprise a pilot study to demonstrate the effectiveness of a neonatal home visiting programme in preventing child abuse and neglect in high risk families in Hanover Park.

15 high risk families from Hanover Park, who will receive weekly home visits for the first 2 years after the birth of the baby will be compared with a selected, matched control group of 15 families who will receive only the services of the normal available resources in the community on different aspects of functioning including:

- * incidence and level of abuse and neglect
- * management of child's health, nutritional, intellectual, emotional, discipline and physical needs
- * levels of stress in the family
- * ability to utilise resources in the community.

METHOD.

1. Conduct a needs assessment through consultation with community organizations including the Hanover Park Action Committee, National Progressive Primary Health Care Network, and others.
2. Liase with the Hanover Park Health Clinic, the Hanover Park day hospital and mobile obstetric unit with regard to setting up such a project in their community.
3. Select the 30 families that qualify as "at risk" according to the Healthy Families America screening tool.
4. Invite and assign 15 families to the treatment programme and assign the other 15 to the control group.
5. Select and train 3 paid volunteer mothers from the community who will visit the families over the 2 year period.
6. Evaluate the quality of functioning of all families before the first visit and 3 monthly for 2 years. (x7)
7. Provide ongoing weekly support and supervision of volunteer mothers.
8. Evaluate the quality of functioning of all families at the end of the 2 year period.

An important aspect is the training and increased skills of local community mothers to provide the home visits giving support and thus becoming a resource for other mothers in need in their community.

PHASE 2.

The second phase will aim to establish a primary preventive service for all new mothers in the Hanover Park community in partnership with existing State and NGO health services. It is hoped that these services will take primary responsibility for funding such a project.

This primary preventive service will comprise various levels of support depending on the assessed needs of families involved.

Every new mother will receive the weekly visit of a community health visitor who will provide her with support and information and will assess how she is coping with her baby and changed circumstances.

If the mother is adjusting well and able to access the available community resources, these visits will be phased out gradually over a period of 3 months. (For example: 4 visits in the 1st month, 2 visits in the second month and 1 visit in the third month.)

Mothers who are assessed to be at risk of child abuse or neglect, suffering from depression and anxiety, or are otherwise stressed and struggling to cope, will continue to receive home visits for a period of at least 2 years or until she is assessed by the home visitor to be in no further need for such support.

An aspect of this phase will entail setting up pilot project in other communities including Khayalitsha, Guguletu Langa etc..

PHASE 3.

The ultimate goal is to establish a national network of neonatal home visiting as one of the preventive aspects of primary health care.

ABOUT THE PARENT CENTRE.

We are a private, non-profit organization, established 10 years ago as the project of Child Welfare Society Cape Town. Our focus has been the development of primary preventive services for parents through opportune support, education and counselling at the common, critical stages of adjustments and other times of stress experienced by parents.

Statistics for the year 1/3/92 to 29/2/93 are:

Counselling sessions offered at a nominal fee	1007
Telephone counselling sessions	1101
Group sessions	268
No. of parent attendances at lectures	4516
Parent attendances at support groups	1730
No. of professional and community leaders attending lectures and workshops	1842

Other services offered include a library on child rearing and related issues and consultation and training for professionals and community workers working with parents and children.

In 10 years our permanent, part-time professional and administrative staff have increased from 4 to 10 and our carefully selected and trained sessional staff number 23.

In May 1992 we opened our second centre in Athlone making our services more accessible to a broader sector of the community. Much of our work has, by necessity, become community based.

Healthy Families America

HEALTHY FAMILIES AMERICA

Research in the child abuse field tells us that the single most effective strategy for preventing child abuse before it occurs is to provide parents with education and support around the time their first baby is born. A wonderful model of reaching all first-time parents with home visitor services already exists in the State of Hawaii. There, over the past eight years, the state's Maternal and Child Health Program has pilot tested, evaluated and now put into place for over 50% of their at-risk new parents a program called "Healthy Start". Visits by paraprofessionals to high risk parents beginning in the hospital at the time of birth and continuing during the critical first months and if necessary, first years of the child's life have resulted in the virtual elimination of child abuse in the populations served. The visits are voluntary; few of the at-risk parents refuse the service.

In 1991, the United States Advisory Board on Child Abuse and Neglect, after a year of study, declared that in response to the national child abuse emergency it is time the nation do more than just report and investigate cases of child abuse. They recommended that we begin immediately to develop a nationwide voluntary program of home visits to all new parents as a critical first step in preventing child abuse.

As a result, the NCPA in partnership with the Ronald McDonald Children's Charities and the Hawaii Family Stress Center, launched an effort in 1992 to replicate the Hawaiian home visitor model across the country under the banner "Healthy Families America". The NCPA chapter network, the state Children's Trust Funds and state Maternal and Child Health Programs have joined this effort. The attached materials provide background on both the Hawaiian model and the Healthy Families America effort. Materials include:

Contents

Healthy Families America - Brochure	First Year Progress Report on Healthy Families America
ZERO TO THREE's Article on Hawaii's Healthy Start	Healthy Families America - an NCPA Fact Sheet
Hawaii's Healthy Start Evaluation	A description of NCPA's "Healthy Families America" project
CHICAGO TRIBUNE - pieces on new parents	Replicating Hawaii's Intensive Home Visitor Program: CRITICAL ELEMENTS
"Reducing Child Abuse Rates Through Support Programs for New Parents" -- an NCPA Fact Sheet	Critical Elements for A Comprehensive Needs Assessment
"Intervening With New Parents: An Effective Way to Prevent Child Abuse" - an NCPA Working Paper	Key Characteristics for Evaluating Healthy Start Replication Efforts
	Communicating About Healthy Families America by Computer Networking

For further information contact Leslie Mitchel, M.Ed, Project Director, HFA, at NCPA, 332 S. Michigan Avenue, Suite 1600, Chicago, IL 60604, (312) 663-3520.



NCPCHA FACT SHEET

National Committee for Prevention of Child Abuse
332 S. Michigan Ave., Suite 1600, Chicago, IL 60604, (312) 663-3520

No. 3

Date January, 1993

REDUCING CHILD ABUSE RATES THROUGH SUPPORT PROGRAMS FOR NEW PARENTS

Deborah Daro, D.S.W.
Director of Research

The National Committee for Prevention of Child Abuse (NCPCHA) has long placed special emphasis on educational and support services for new parents in constructing a comprehensive child abuse prevention plan. While a variety of programs for new parents have emerged over the past decade, home visitation services have shown notable promise. Of particular interest is an Hawaii-based program, Healthy Start, which provides comprehensive home visitation services to all families identified as being at-risk for abuse at the time a child is born. NCPCHA, with funding from Ronald McDonald Children's Charities, launched a nationwide initiative in 1992 to promote the replication of the Hawaii concept in at least 25 states by the end of 1994. The purpose of this fact sheet is to examine the evidence supporting this course of action.

BUILDING HEALTHY PARENT-CHILD RELATIONSHIPS IS BEST DONE BY BEGINNING AT THE TIME OF BIRTH.

Helping parents before abusive or neglectful behaviors develop is significantly more likely to produce positive parent-child relationships than waiting until a parent has adopted a pattern of maltreatment. Further, the heightened willingness of new parents to seek out and utilize resources presents a golden opportunity for prevention programs.

The need to reach out to new parents is particularly important where economic and social resources may be limited. Today, young children are the poorest group in America. In 1990 nearly one out of every four children under the age of six lived in poverty. Each year over five million young children are being raised in households with incomes below the federal poverty line. Beyond the question of economic resources, a significant percentage of children are being reared by a single parent: one in four children live in single parent families, generally with their mother. While this situation is often the result of divorce, almost one-quarter of all newborns, 50% of all infants born to teenage mothers, begin life with only one parent.

In addition to having limited economic and adult resources, today's children and their families often face difficulty accessing basic medical care and child welfare services. Over 13% of all children and 14% of all pregnant women are uninsured either through public or private programs. Further, child welfare budgets have not kept pace with increased reports of maltreatment. In 1992, less than two-thirds of confirmed cases of abuse received therapeutic interventions, 15% fewer than were served in 1990.

HOME VISITATION PROGRAMS OFFER A UNIQUE OPPORTUNITY TO ENGAGE HIGH-RISK FAMILIES IN ONGOING SERVICES

Over the past ten years, a wide range of parenting education and support services have emerged providing new parents with an impressive array of assistance in meeting the physical and emotional needs of their children. Many of these models, including group-based educational programs, family resource centers and ongoing family support groups, have produced notable changes in a parent's understanding of infant and child development; her capacity to access necessary services for herself and her children; and improved capacity to meet their child's needs.

APPENDIX TWELVE

MISCELLANEOUS INFORMATION SHEET

1. **Child's Name:**
- Mother's Name:**
2. **Place of birth:** MOU [] SOMERSET HOSP. [] OTHER []
3. **DIFFICULTIES** experienced in **PREGNANCY:**
.....
.....
4. **DIFFICULTIES** experienced **AT BIRTH:**
.....
.....
- 5.
- | | <u>Birth</u> | <u>At 2 years</u> |
|---------------------|--------------|-------------------|
| Weight: | | |
| Height: | | |
| Head Circumference: | | |
| Apgar: | | |
6. a. **HEALTH** of child since birth:
- b. **Admissions to hospital:** YES [] NO []
- If YES, Please give reasons for admission /s.
.....
.....
7. **Photocopy of the clinic card** [] please tick.
8. **How long was the baby breastfed?** months.
9. **Has mother fallen pregnant or had another baby in the past 2 years?**
Yes [] No []
- If yes, Indicate **age of new baby** **or stage of pregnancy**
10. **What are the child care arrangements?** Mother caring for child []
Creche " " " []

For example: Childminder caring for child
 a. Family member []
 b. Neighbour []
 c. Other []

11. Is mother employed at present? Yes [] No []

If yes, is this a NEW job [] or a return from maternity leave []

If no, did mother lose her job [] or never worked []

12. Marital status: Single []
 Married []
 Divorced []
 Widowed []
 Living together []

13. Father/partner's occupation:

Mother's occupation:

14. Is income perceived as adequate? Yes [] No []

If mother single or divorced, does father maintain child? Yes [] No []

15. Accommodation:

Number of family units living at home []

Number of living rooms (bedrooms and lounge) in home []

16. Life stressors or crises reported by mother

.....

17. Maternal Mental State: EPDS score:

18. Mother's level of confidence in herself as :

a. a person: (none) 0 1 2 3 4 5 6 7 8 9 10 (very high)

b. a worker: (none) 0 1 2 3 4 5 6 7 8 9 10 (very high)

c. a parent: (none) 0 1 2 3 4 5 6 7 8 9 10 (very high)

19. a. Was it possible for you to buy a book for this child in the last 6 months?

YES [] NO []

b. Was it possible for you to buy a toy for this child in the last 6 months?

YES [] NO []

CONSENT FORM

the parent centre

61-9142/3

parent education and counselling
a project of the child welfare society cape town

31 EDEN ROAD,
7700 CLAREMONT

HEALTHY FAMILIES AFRICA PROJECT CONSENT FORM.

The Parent Centre in partnership with the Red Cross Hospital Child Health Unit would like to follow the development of children from the Hanover Park community. If you agree to participate in this project your child will benefit by being screened for any developmental difficulties at the age of 3 months, 1 year and again at 2 years.

Your consent will allow us to request any information from relevant organizations and clinics in order to render the best service possible to the families involved in the project.

I..... am interested in participating in the Healthy Families Africa project and give my permission to be interviewed and for my child to be assessed at 3 months, 1 year and 2 years.

Signature Date

Witnessed by Date

NEONATAL DATA AND PRE-SCHOOL HEALTH RECORD FORMS

NEONATAL DATA
NEONATALE GEGEWENS

To be filled in by Doctor/Midwife on discharge of baby
Ongt ingevul te word deur Dokter/Vroedvrou by ontslag van baba

Mother's name
Moeder se naam

Hospital No. (mother)
Hospitaal No. (moeder)

Date of birth
Geboortedatum 94 Born at/Geboere by

Gestation period
Swangerskap duur Term Hospital
Hospitaal

Birth mass
Geboortemassa 3050 MOU/MBE Hanover Park

Length
Lengte Sex/Geslag M FV BBA/GVA

Head circumference
Kopomtrek SEROLOGY/SEROLOGIE
Mother/Moeder

APGAR:

BLOOD GROUP/BLOEDGROEP
Mother/Moeder Baby/Baba

COMPLICATIONS
KOMPLIKASIES GRAV PARA

Pregnancy
Swangerskap Normal

Labour/Delivery
Kraam/Verlossing NVD

Postnatal (Baby)
Post Nataal (Baba)

DISCHARGE ONTSLAG	Date Datum	Mass Massa
	Feeding Voeding	Family planning Gesinsbeplanning

Postnatal clinic appointment
Nageboortekliniek afspraak
Date/Datum Time/Tyd

Local clinic
Plaaslike kliniek

Home visit/Tuisbesoek
Date/Datum (Sign./Handtekening)

STYCAR (4½-6 yrs/jr.) Date/Datum
Vision test
Gesigstoets

HEARING
OUD. Age/Oud. Date/Datum

PRE-SCHOOL HEALTH RECORD
VOORSKOOLESSE GESONDHEID REKORD

PERSONAL DATA/PERSOONLIKE GEGEWENS

Child's surname
Kind se van

First name(s)
Voornam

Address
Adres

Hanover Park

Postal code/Poskode 7150 Tel.

CLASSIFICATION/KLASSIFIKASIE

Private Privaat	Medical scheme Mediese skema	Free patient Vry pasiënt	
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CHILDS FOLDER NUMBERS/KIND SE LÉER NOMMERS

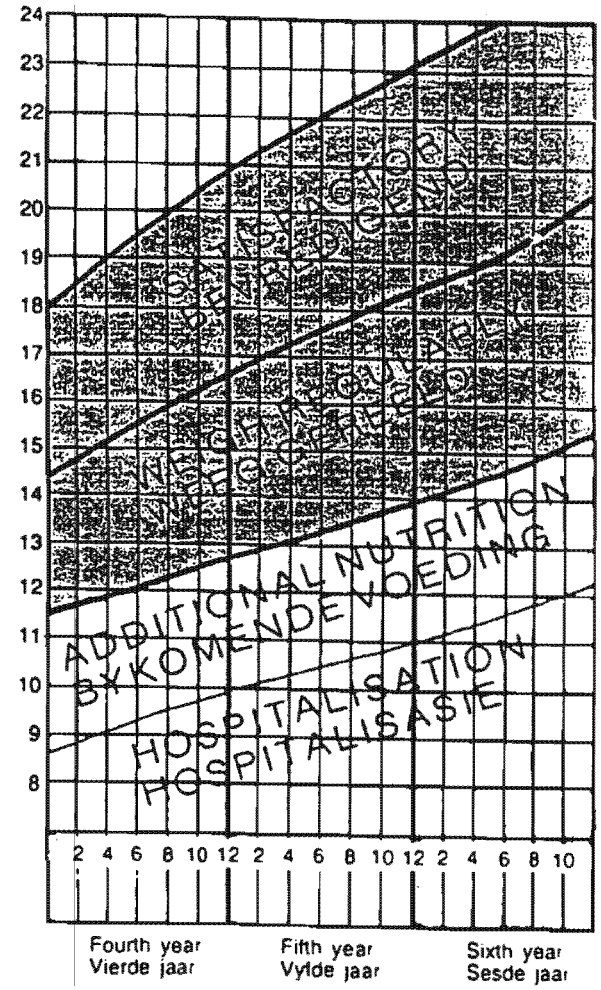
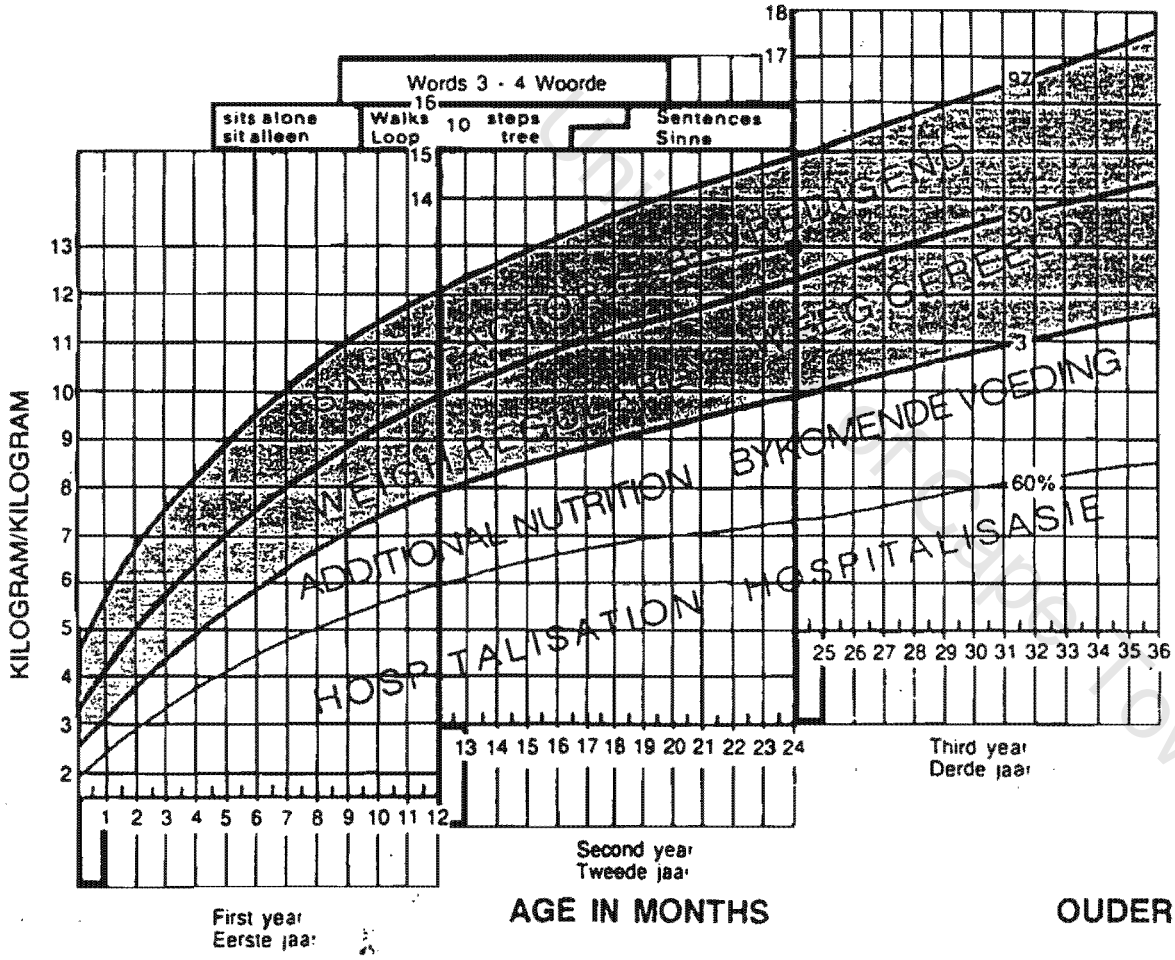
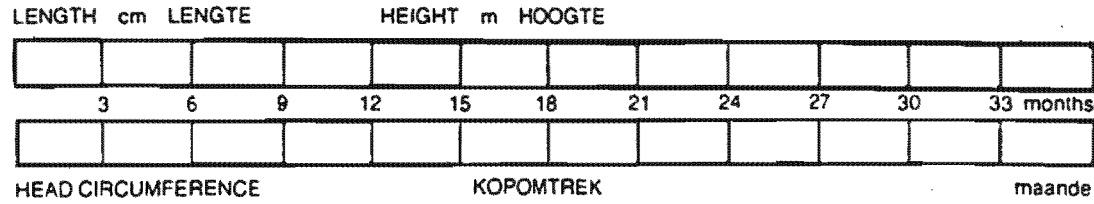
Hospital/Clinic/Health Centre Hospitaal/Kliniek/Sentrum	Number Nommer

IMMUNISATIONS/IMMUNISASIES

Age Ouderdom	Immunisation Immunisering	Date administered Datum toegedien	Administered by Toegedien deur	Return date Teruggekomdatum
New born Pasgeborene	B.C.G.			
2 months 2 maande	Polo, D.P.T., B.C.G.			
4 1/2 months 4 1/2 maande	Polo, D.P.T.			
6 months 6 maande	Polo, D.P.T.			
9-10 months 9-10 maande	Masala/Masels			
18 months 18 maande	D.P.T., Polo			
5 years 5 jaar	D.T.			
School beginner Skoolbeginner	B.C.G.			
Other Anders				

D—Diphtheria/Witsersiekte T—Tetanus/Stam in die heks P—Whooping Cough/Orkieses
* Only if no evidence of previous vaccination (scar or active vaccination).
* Slegs indien geen bewys van vorige vakinasie (skars of aktiewe vakinasie).

GROWTH CHART - GROEIKAART



GROWTH CHART EXAMPLE

Notes/Notas.....

.....

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HAWAII DEPARTMENT OF HEALTH: OUTLINE OF HEALTHY START PROGRAMME

I. BACKGROUND AND THEORETICAL BASIS FOR THE PROGRAM

The National Committee for Prevention of Child Abuse (NCPCA) notes that the American family has undergone tremendous changes in the past several decades, changes that pose great risks to the well-being of children. Unmarried women give birth to seventeen percent (17%) of all babies. Over 70% of all children will live in a single parent household before they are 18, and almost one quarter of American families are headed by single parents at any given time. Teen pregnancies have increased dramatically. About fifteen percent (15%) of all babies are born to teenage parents.

Children are the fastest growing poverty group in this country; over one-fifth of all children and over half of all minority children live in poverty. These children are reared in homes with limited financial resources, their mothers have little access to adequate prenatal care or health coverage for their children, and social support systems to assist these families are declining. The incidence and severity of child abuse and neglect have increased dramatically. Between 1985 and 1986, reported child abuse fatalities increased by 23%, and the actual number most likely exceeds this figure. NCPCA also notes the large number of deaths attributed to accidents or to Sudden Infant Death Syndrome. They point out that the situational causes of deaths of young children are often difficult to determine, but factors such as the nature of the investigation or whether there are siblings in the family often enter into the determination. Both nationwide and in Hawaii, about 80% of all severe abuse and most deaths occur among children under age five, and the median age of death is 2.6 years, (Daro, 1988)4.

In identifying its strategies for reaching its goals, NCPCA recommends home visiting services for new parents as a key approach for reducing the incidence of child abuse and neglect. NCPCA states:

“unlike some policies and programs which have unfolded in the absence of empirical evidence or theoretical frameworks, new parent programs have solid and expanding evaluative and theoretical foundation. Data suggest that the risk of child abuse or neglect can be significantly reduced if a continuum of supportive, educational and therapeutic services is made available around the time of birth.”

NCPCA notes that new parents can be identified through hospital records, they are more open to intervention at this time, and that it is easier and more effective to intervene before abuse occurs.

Furthermore, the first few years of life comprise the most important stages of human development and support during this period is critical to the healthy development of the infant. (Ibid)

Theoretical Basis for Hospital Based Screening to Determine Risk

Traits of Families at Risk

A number of research and service projects have been working in the area of early identification of at risk families, involving screening and assessment procedures. A paper was developed on screening and assessment for the National Center on Child Abuse and Neglect in 1978, which provides good background and conceptual information. Excerpts from this paper follow.

“The usual rationale for a predictive procedure is that families at risk resemble confirmed cases for abuse and neglect in specific ways. Whether these traits are ‘causes’ of maltreatment, or whether both the traits and the maltreatment are common expressions of underlying factors, persons with certain traits are at greater risk if the future resembles the past. Studies of confirmed cases have identified scores of traits over-represented among abusive or neglectful families, including characteristics of the child, of the parent, and of the family.

Special characteristics of the child that may increase the chances of maltreatment include mental retardation (Elmer, 1967; Martin, 1973), physical handicaps (Caffey, 1972), emotional

disturbance (Elmer, 1967), multiple birth (Bishop, 1971; Caffey, 1972), unwanted pregnancy (Evans, 1970), and premature birth or low birthweight (Fontana, 1968; Klein, 1971; Klaus, 1972; Stern, 1973; McRae, 1973). The last is widely regarded as a consequence of the delay in releasing premature infants from the hospital interfering with the natural bonding process, although low birthweight can also reflect a reluctant mother's disinterest in prenatal care and nutrition. One or more of these factors were present in about one out of eight (12%) child victims involved in the American Humane Association's analysis of 63,000 substantiated cases (1980).

Parental and family traits often found in confirmed cases of abuse include mental health problems (Zalba, 1967; Brown, 1968; Sussman, 1968; Togut, 1969; Cherry, 1971; Oliver, 1971), substance abuse (Fontana, 1971), marital problems (Bennie, 1969; Justice, 1976), adolescent parents (De Lissovoy, 1973), social isolation (Leaverton, 1968), financial difficulties (Birrell, 1968; Gregg, 1969), limited educational background (American Humane Association, 1980), heavy and continuous child care responsibilities (Allen, 1969; Bishop, 1971; Rohner, 1975) and parental history of abuse as a child (Melnick, 1969; Silver, 1969; Fontana, 1971; Oliver, 1971; Straus, 1972).

The most powerful predictors of potential abuse, however, have emerged from studies of mother-infant bonding. Most new mothers spontaneously love their babies (child maltreatment would surely be an unmanageable problem otherwise), and this love is ordinarily expressed by stereotypical behavior that can be observed in her handling of the infant. She regards the newborn child *en face*, cuddles it, she speaks to it in a characteristic tone of voice, and she attends to its feeding, regurgitation, and excretion with a cheerful tolerance that she would not ordinarily show toward another person or animal (Kennell, 1976; Hersh, 1978). When new mothers do not exhibit normal bonding behavior (or verbally communicate disinterest in or dislike of the neonate) there is grave reason to fear for the safety of the child (Hurd, 1975; Gray, 1976; Schwartzbeck, 1977; Suomi, 1978). Because medical staff of prenatal, obstetric, and newborn nursery facilities are in a good position to observe and interview mothers who seem to have bonding problems, a fairly specific screening model has emerged based upon the assessment of perinatal patients on the bases of many traits, including mother-infant interactions and any previous history of abuse and neglect."

In their book "Helping the Battered Child and his Family" (1972), C. Henry Kempe and Ray E. Helfer, two physicians who pioneered the scientific study of child abuse, advocate prevention through hospital-based screening of perinatal patients and follow-up services to those identified as at high risk. Predictive methods are described in Gray (1972), Polansky (1972), Helfer (1974), Schneider (1974), Hurd (1975), Ayoub (1977), Franklin (1977), Burgess (1978), Knight (1978), and Milner (1978). While some information routinely collected from maternity patients is utilized in these screening procedures (for example, the age of the mother), inpatient programs generally collect specific additional information for purposes of risk assessment. (Houston, 1982) 5

A 1972 study of prediction in perinatal screening and follow-up has been influential in providing a model and screening method for programs. In this study, undertaken by Kempe's group at Colorado General Hospital in Denver, patients were given a battery of four screening procedures, including interview, questionnaire, labor/delivery room observation, and postpartum observation during the first six weeks after birth. According to Drs. Kempe and Helfer (1978), almost four out of five (79%) among 350 first or second-time mothers were correctly classified as successful or unsuccessful parents by a composite of these four procedures. Delivery room observations alone accounted for three out of four (76.5%) accurate classifications. (Houston, 1982)

Kempe's Family Stress Checklist was formally validated by Solbritt Murphy, Bonnie Orkow and Ray Nicola in Denver in a study published in 1985. (Murphy, 1985) 3. This study was important in that it has paved the way for wide-spread utilization of the Checklist.

Theoretical Base for Home Visiting Family Support Interventions

Provision of home-based family support has become recognized as a most effective intervention with families at risk for child abuse and neglect. The need to provide services on a home outreach basis is related to the characteristics of these families, including inability to trust and social isolation. These families are least likely to seek services, to come to an office for services, or to attend classes or groups designed to assist new mothers.

Also, since as children they were often not able to trust their caretakers, they may have difficulty in establishing other relationships. Because high risk parents often grow up being socially isolated, they do not develop positive personal support systems and do not know how to use community resources constructively. They are often resistant to services and may fear letting outsiders into their lives. Lack of nurturance and inability to form positive relationships often result in low self-esteem, a very common characteristic of high risk parents. Low self-esteem affects not only their relationships with others, but also their general motivation and ability to cope with problems in life.

Basic components of successful intervention include building trust with the parent(s) for acceptance of services, giving emotional support to the parent who has often been abused or raised without nurturance, informally educating parents about child growth and development, facilitating positive parent-child interaction, coordinating health services and conducting developmental pre-screening, modelling of better skills for coping with stress and crisis, identifying and enhancing the mother's formal and informal support systems, and providing case management and advocacy.

Many sources describe a theoretical base for early intervention and the role of the home visitor.

A theoretical or conceptual model of parenting is critical in designing effective new parenting services. Creating a 'theory of parenting' imposes an order and prioritization of problem areas and service strategies. It helps program planners identify the attitudes, behaviors, and conditions which may pose barriers to effective parenting and may limit the program gains." Figure A on the following page "presents one approach to considering factors at play in parenting . . . It is an interactive model. Each of the five identified components both influence and respond to the other four" (Daro, 1988)

Again quoting from NCPA:

"The most essential component in formulating any relationship is the capacity to love or respond to another. Often adults who were abused as children, who were raised without the nurturance or support of an identified primary caretaker . . . lack this basic capacity. Parents who exhibit a lack of emotional attachment to their children are generally very poor candidates for parenting services. These individuals may require substantial therapeutic intervention and support to understand their own psychological make-up and difficulties before being able to address their relationship with their children. Fortunately, a relatively small percentage of even an abusive population suffers from this degree of personal dysfunction, suggesting that the majority of parents have at least this minimal requirement for adequate parenting." (Daro, 1988)

Figure B. The chart on page 7, entitled "The World of Abnormal Rearing, or W.A.R. Cycle" portrays the socio-emotional life cycle of the abusive or high risk family, showing how "Childhood Missed" affects the social and emotional development of the abused/neglected child and perpetuates an intergenerational cycle of abnormal parenting (Helfer, 1976).⁶

Program administrators and managers, as well as the home visitors themselves, must learn to recognize the characteristics of the high risk families they will be working with and how these characteristics impact upon the child. These characteristics are included in the Family Stress Checklist. The chart on page 7 outlines

Service Approach to Prevention of Child Abuse

History of abuse, neglect as a child →	Lack of trust, inability to nurture ••	Agressive outreach to families, establish a trusting relationship, provide nurturing
Low self esteem →	Poor coping or problem solving skills, difficulty dealing with stress ••	Role modelling of coping skills and problem solving, building of self esteem
Poor communication skills →	Inability to communicate needs, frustration ••	Assist and support parents in learning to express needs
Social Isolation →	Lack of emotional support in crisis ••	Provide emotional support, help build networks both social and helping
Unrealistic expectations of child →	Anger at and punishment of child who is developmentally unable to do what parent wants and expects ••	Informal counselling regarding normal child development
Poor impulse control →	Lashing out at child physically in rage ••	Help reduce stresses, counselling in alternatives to hitting child, attachment facilitation

These services are often organized in a home outreach approach, which includes informal counselling, parent child attachment facilitation, "parenting the parent" or nurturing activities, and linkage to other services and informal support systems. Respite or "Time Out" child care is used with parenting groups which combine several of these strategies. Professional counselling is sometimes utilized.

the psychosocial characteristics of high risk parents as noted in the checklist, how these affect the parenting of their children, and intervention approaches used to combat these problems.

NCPA also notes:

"It is important for parents to know, in at least general terms, the differing cognitive and physical abilities and needs of children at different stages of development. For example, a parent with a new infant needs to know how to feed the baby, what a baby should be fed and when the infant needs medical care. As the child develops, other practical knowledge is needed such as how to child-proof the house, how to provide support and direction for the child, and how to discipline the child. . . . In many respects, conveying this type of basic knowledge to parents may be the easiest task in improving parenting potential.

Beyond providing parents with general information, however, lies a more difficult task, that of helping parents translate knowledge into behavior . . . Identifying and addressing the barriers parents face in meeting their baby's needs can be a complex and time consuming task for practitioners. **Modelling the implementation of basic parenting information is one of the most effective ways to assist parents in integrating their newly acquired knowledge into how they care for their children.**

A critical factor in the parent-child dyad is the child himself. Some babies are more difficult and temperamental than others. Low birth weight babies, premature infants or developmentally delayed children can be particularly challenging. Further, as with all relationships, some mothers and babies are simply more compatible and better suited to each other. If the infant reminds the mother of someone she particularly dislikes, most commonly the baby's father, she may have difficulty providing the care she knows her child needs. **In working with new parents, therefore, it is essential that attention be paid to the characteristics of the child and the manner in which the child and parent temperaments complement or disrupt the parenting process.**

Finally, all of these factors operate within a broader context of the parent's personal and social environment. The ability of a young mother to adequately care for her child is influenced not merely by her own psychological make-up, her level of parenting knowledge and skills and the characteristics of her baby. Her parenting capacity is also shaped by the support she receives from her family and friends and her ability to master and effectively utilize other social institutions such as the local health care system, welfare system and educational system. In addition, the total pool of resources potentially available to parents expand or limit their overall ability to meet the needs of their children. **The model suggests that programs which work on all of these areas either alone or in association with other community based agencies hold the most promise for success. Based on the above description of factors which influence a parent's ability to parent, it becomes clear why the simple provision of parenting knowledge is insufficient in effecting change, or why an expansion in health care services does not always result in higher use by those eligible for care.**

Much of what we know with respect to the individual causes of child maltreatment suggests that direct interventions with the parents, preferably as close to the birth of their first child as possible, as excellent strategies for reducing levels of abuse, neglect and emotional maltreatment. . . . While the content and structure of programs vary, **critical service goals for new parent programs should include:**

- Increasing a parent's knowledge of child development and the demands of parenting;
- Enhancing a parent's skill in coping with the stresses of infant and child care;
- Enhancing parent-child bonding, emotional ties and communication;
- Increasing a parent's skill in coping with the stress of caring for children with special needs;
- Increasing a parent's knowledge about home and child management;

- Reducing the burden of child care; and
- Increasing access to social and health services for all family members." (Daro, 1988)⁴

The work of Henry Kempe is among the most outstanding in demonstrating effectiveness of home visiting intervention with high risk families. Kempe's initial work identified 100 high risk families out of 500 families interviewed, placed 50 into home visiting intervention services and 50 into a no additional services control group. After two years, a review was conducted of child protective service reports for 25 families in each group and also those families determined to be low-risk. None of the low risk families or the high-risk intervene groups were confirmed for abuse. Five children or twenty percent (20%) of the high-risk no extra services group were hospitalized for severe abuse including head injuries, scaldings, and fractures (Kempe, 1978).²

The Healthy Start demonstration program evolved from the work of the Kempe program in Denver. The first program in Hawaii was initiated by HFSC at Kapiolani Medical Center. An Early Identification Project used Kempe's Family Stress Checklist for risk identification. It then referred at risk families to the Hana Like Home Visitor project and also to a control group of general community services. Results after two years were similar to those of the Kempe Center. A state council on Child Abuse was also established by HFSC with neighbor island committee representation. By 1979, Family Support programs featuring early identification and home visiting were established at five sites on all major islands. The Healthy Start project initiated in 1985 was the next step in program development, with new demonstration features.

Overview of the Healthy Start Program

Healthy Start services begin with hospital based screening to identify at risk newborns from the target area. Paraprofessional "Early Identification Workers" determine eligible families (from the target area) by reviewing data on current admissions. For eligible families, the mother's record is reviewed for eligibility, using a checklist of 15 risk factors developed by HFSC (see Appendix 1). For a record screen with two or more items checked off, staff conduct an interview with the mother, using the Family Stress Checklist. The interview results are scored based upon criteria of the Family Stress Checklist. A score of 25 or more is considered to be high risk. At risk families are encouraged to accept home visiting services. The project has experienced a service acceptance rate of about 95%.

The assigned Family Support Worker visits or phones the mother in the hospital, if possible, in order to schedule a home visit and start the trust building process. The early intervention phase is occupied with building trust, assessing family needs and strengths, encouraging enrollment in the WIC program, assisting with concrete needs such as obtaining emergency food supplies and completing applications for public housing, and providing crisis intervention in spouse abuse situations. Workers focus primarily on providing emotional support to parents and teaching effective ways of dealing with everyday problems. Workers use a "parent the parent" strategy, allowing dependence initially, and then encouraging independence through a "do for, do with, cheer on" approach.

Workers also focus on promoting positive parent-child interaction. The HOME and Feeding NCAST Scales (Barnard, 1988)⁷ are conducted in the first few months of enrollment to identify problem areas, and again at a later period to determine progress and changes needed in intervention. Workers use parent child interaction materials developed by the Stress Center, as well as the Mother-Baby Play Book (Algen, 1976)⁹ and activities from the HELP manual (Furuno, 1977).⁸ Each family remains in the program until the child is five years old. The following sections describe the Healthy Start Model in more detail.

At the initial hospital meeting, agreements were reached regarding the following:

- a. How EID staff would identify obstetric patients from the target area. The procedure differed from hospital to hospital.
- b. How EID staff would identify high risk families. (See below for Record Review and Assessment process).
- c. How EID staff would interact with hospital social service staff in terms of role definition. (See Appendix I)1 for sample terms of agreement.)
- d. How to provide safeguards for patient rights, including; consents to be obtained and physicians to be notified.

After the hospital meetings, working agreements were drawn up by HFSC staff and signed by appropriate HFSC and the hospital representatives. A sample letter of agreement is attached as Appendix I-1. To ensure clear communication, copies of the agreement were circulated to nursing and social service department heads and to the chiefs of staff for obstetrics and pediatrics.

In general, in order to identify only those families from the target area, it is necessary to review the obstetric admissions for the previous 24 hours on a daily basis. The procedure for this varies by hospital. At Kapiolani Medical Center for Women and Children (KMCWC), EID staff review all hospital admissions and identify those from the target areas by zip code, verifying by address. At Kaiser Medical Center (KMC), EID staff review all charts and identify those from the target area by zip code and address. At Queen's Medical Center (QMC) and Wahiawa Hospital, EID staff at first called the OB unit ward clerk and were given the names and addresses of patients in the target area. Later, a new procedure was developed at Queen's whereby the hospital social worker identified patients to be seen at Queen's each day. At Castle Medical Center, EID staff see all patients from target areas and screen by means of a brief in-person interview rather than by reviewing charts.

In order to enable the EID workers to verify the family address as being within the target area, we developed a list of street addresses within the target census tracts. The City and County provided an alphabetized computerized listing of all streets on Oahu with census tracts (CT) and zip codes for each street. Each year, program staff manually compile a list of target streets from the master list of Oahu streets. It was important to have the CT listed on the street list for each street name so that the CT for each client was readily available for logging. This was necessary for the data management system.

Once target area families are identified among all admissions, the EID worker notes name, address, and phone number and enters mother's name, address, Census Tract, infant's birth date and hospital of birth on the master log (see Appendix I-2) or into the computerized data system.

Implementation Issues Related to Identification of Target Population

The first implementation issue was encountered developing an accurate list of streets within the target areas, which has been difficult. The City and County list of Oahu streets is not sorted by census tract and the huge number of streets has led to clerical errors despite careful review by three HFSC staff. With continual housing development, the list must be updated each year.

The second implementation issue was limited access of EID Program staff to hospital charts at some hospitals due to confidentiality issues. Individual hospital agreements reflect the various ways in which patient access has been accommodated. Access is simplest when the EID worker is an employee at the hospital in question. However, efficient program management precludes having EID staff under a variety of employers. Currently a new process is being explored by several hospitals whereby a form giving consent for Healthy Start to visit in the hospital would be given to all maternity patients upon admission.

(2) Medical Record Review for Risk Indicators

The second EID element is to review medical records of all families from the target area in order to obtain information necessary to determine a positive or negative score on the record review. This requires completion of the Referral Record items 1-15 (Appendix I-3). A positive record review is defined by two or more True statements on the Referral Record **OR** by only 1 True statement on #1, #9, or #12. Definitions and clarifications of terms on the Referral Record are included as Appendix I-4.

Initially all families were seen for interview regardless of results of record review. Starting in October 1988, only those families having a positive record review were interviewed.

It is important to note that a review of the medical record to obtain information on the Referral Record does not entail reading the entire chart in detail. Most information is readily available on a few pages, such as the admission sheet, prenatal record (where available), delivery record, and nursing progress notes.

The first step in implementation completion of the hospital working agreement as already described, to allow EID workers to review charts. As noted above, record reviews are completed by EID workers at KMCWC, Kaiser, and Wahiawa, but by hospital social workers at Queen's.

The second step was to ensure reliability among EID workers in record reviews using the Referral Record. To this end, the Definitions/Clarifications of Terms was developed (see Appendix I-4). EID workers were trained in the definitions of the individual items on the Referral Record. They also were required to review the same medical records as the trainer and then the same medical records as another EID worker, to test reliability among workers. Training continued until all workers consistently rated records appropriately as positive or negative.

(3) Assessment of Risk Status

The third EID element is the assessment of risk status to identify all high risk families in the target area. This requires an interview of all target area families with positive record reviews. At this time the Intake Record (Appendix I-5) is completed, providing basic demographic data on the family as well as its current service providers.

The EID interview consists of a set of questions designed to obtain the information needed to score the **Family Stress Checklist** (Denver, 1972, Appendix I-6) in a minimum amount of time while making the client feel comfortable in responding honestly. While the phrasing of questions may differ slightly, depending upon to the person being interviewed as well as the interviewer, and while the order of the questions may vary, the interview format basically follows the Interview Questions Schedule (Appendix I-7).

It should be emphasized that training is needed to develop the specific skills necessary to successfully complete this EID interview and to ensure reliability among interviewers. In addition to the general training received by all Healthy Start staff, special training sessions for EID workers were developed. An outline of these sessions is available in Appendix I-8.

After the interview, the client signs a Consent for Release of Information (Appendix I-9) to certain individuals or organizations. This two-way consent form specifies the pediatrician, obstetrician, Department of Human Services including Child Protective Services (CPS), and Public Health Nursing, and leaves space for including other service providers, such as psychiatrists. It has been found useful to have this form printed in triplicate carbonless copies, with one copy for files, one for evaluation, and one for MD or PHN. The copy to be used for evaluation purposes in obtaining information from CPS is kept in a separate folder, in alphabetical order for easy access at the time of evaluation.

Following completion of the interview, the **Family Stress Checklist** is rated and scored. Each item is rated as Normal with a value of 0, Mild with a value of 5, or Severe with a value of 10. Ratings are based on the rating scale as described in **Rating the Family Stress Checklist** (Appendix I-10). A total score of 25 or above

for either parent places a family in the high risk category, eligible for Healthy Start home visitor services. A total score of 40 or above places the family in severe high risk category, based on results of the validation study (Appendix I-11) published by Murphy, Orkow and Nicola in 1985.

Interviews were initially scored in the weighted format suggested by the Family Checklist authors. However, the 1985 validation study showed weighting of items was unnecessary, and starting in 1987 interviews were scored in the manner described above.

For each client interviewed, the following paperwork needs to be completed within 48 hours of interview:

- (1) An Intake Summary (see sample Appendix I-12) is completed, serving as a summary of the interview itself, with no interpretation. It is based on the Intake Summary Outline (Appendix I-13) to simplify writing.
- (2) Two Feedback Forms (Appendix I-14) are completed and mailed to the client's obstetrician and pediatrician. Additional Feedback Forms are sent to other involved service providers.
- (3) A Client Flow Sheet (Appendix I-15) provides pre- and post-test information on interview results at program entry and again at promotion to Level IV (quarterly follow-up status). At entry the admission scores are documented. When client is promoted to Level IV, a post interview will be conducted and the Flow Sheet completed.
- (4) A Psychosocial Summary checklist (Appendix I-16) is completed to be sent to the pediatrician once an outreach worker is assigned.
- (5) A Follow-up Form (Appendix I-17) is filled out and placed in a tickler file by month in which follow-up is needed. Initially, follow-up contacts with the referral agencies were made at 1, 3, 6 and 12 months. Time constraints have limited this to a contact at 1 month to ensure that linkage has been established. A useful means for follow-up where possible is an "extended team" meeting, in which EID staff who have referred a client to a Healthy Start Team meet with that Team to discuss all referrals in the past month. This enhances information sharing and communication among EID and Family Support Worker staff.

It is important to ensure standardized data collection so that essential information would be collected for all families. This required development of all the forms necessary for accurate documentation of the assessment process. (See Appendix I-3 to I-17 for samples of these forms).

Implementation Issues in Risk Assessment

One issue was to ensure reliability of scoring and consistency of documentation among EID workers. Close supervision was found to be necessary. Each screen and interview is reviewed by the supervisor on a daily basis.

Another issue was to assure that the daily workload is distributed equitably among all the workers. Initially one EID worker covered Kaiser, Wahiawa and Queen's Hospitals and one EID worker covered KMCWC. As additional Healthy Start Teams were added, additional EID staff members were hired. Currently, two EID workers cover Kaiser, Queen's and Wahiawa. Four workers cover KMCWC, with one of them also responsible for Castle's patients. It has been found most efficient to have all EID workers at KMCWC review records for specific Healthy Start areas and meet each day at 9:00 a.m. to review with their supervisor the numbers of patients needing to be seen so as to distribute workload fairly among workers. It should be noted that EID workers rotate working a Tuesday to Saturday schedule to cover Saturday deliveries at all hospitals.

(4) Referral of High Risk Families to Healthy Start Services

The fourth EID element is the referral of high risk families to a Healthy Start Home Visitor Team and/or other services as appropriate.

The procedure for referral to Healthy Start Team requires the EID worker to make two calls, one to the EID Supervisor to review the case and validate high risk status, and the second to the Healthy Start Team Supervisor/Manager to refer the case. Referral calls are made following the interview, regardless of day or time. The paperwork is to be completed within 48 hours of interview and given to the supervisor for review. Once reviewed, a copy of the Intake Record, Intake Summary, Consent Form, the Psychosocial Summary, and the Client Flow Sheet are sent to the Healthy Start Team Manager. The Referral Record, Family Stress Checklist, Follow-up Record and copies of the Consent Form, Intake Record and Intake Summary are kept in the EID office files.

EID workers, with supervisor approval, may refer families to other services as appropriate. These include, but are not limited to, public health nurses, public and private mental health providers, respite centers, other home visitor programs (for example, Island-Wide Hanalike, Kupulani), hospital social services and private social services.

Additionally, referrals to Children's Protective Service (CPS) must be made when the EID worker and supervisor suspect risk for the safety of the infant. This is automatically to be considered when the checklist score is over 40 and the patient is refusing services. Such referrals require clear communication with physicians, hospital staff and with the patient.

Training specifically for EID workers was developed in several areas. To familiarize EID workers with the nature and eligibility requirements of community resources available, training in addition to the basic orientation training was developed, including site visits and inservice by various agency representatives. To ensure that the EID workers' approach to patients/clients was effective in facilitating acceptance of services, training by both supervisor and experienced workers using modeling and role playing has been valuable.

To ensure that EID workers accurately and fully convey information in actually making a referral, training focused on how to determine what information needs to be related, and how to document referral.

To ensure appropriate action and sensitivity in the specific issues involved in referrals to CPS, we found that training our own workers was not adequate to ensure a smooth referral process. We needed to meet with CPS administrators and develop a written working agreement addressing areas of responsibility and avenues for concerns to be raised for both agencies.

Implementation Issues Related to Referrals of High Risk Families

Initially all high risk families were referred to the Healthy Start Home Visitor Team. In later years when caseloads exceeded projections, Healthy Start teams closed intake for various periods. At these times EID staff make referrals to community resources as available and appropriate. Since most often truly appropriate community services other than Healthy Start are not available for high risk families, this is time consuming and stressful for EID workers. Extra support to EID staff has been offered through special inservices and close supervisory contact.

High caseloads and considerations regarding appropriateness of intervention also resulted in a decision that Healthy Start teams would not serve clients active with Children's Protective Services (CPS) prior to the birth of an infant. As of July, 1990, EID workers do not interview families of newborns who are active CPS clients.

It is very important for EID workers to have confidence in the services of the home visiting teams to which they make referrals. We have found, both in our own program and in neighbor island programs, a tendency for some tension to exist between EID and Family Support staff. Both formal and informal contacts between

these teams helps to build confidence, including extended team meetings facilitated by managers to review status of cases.

(5) **Quality Assurance**

The final EID element is to provide for quality control. There are four components of the EID quality assurance plan. First, on a daily basis, all record reviews or screens and all interview results are reviewed by the supervisor to ensure completeness and appropriate disposition. Second, a screening tracking log (Appendix I-18) is kept on a monthly basis to ensure that all eligible families are screened. This log compares the number of births with numbers of families screened at KMCWC and provides for documentation of further action for those who were not seen at birth. Third, on a quarterly basis, progress towards meeting contract objectives is reviewed and incorporated into a plan for the remainder of the year. Fourth, on an annual basis, 20 EID records are pulled at random from the files and subjected to review by the HFSC management team, using the HFSC Quality Assurance Plan EID Chart Review form (Appendix I-19).

Implementation Issues

While a monthly print out of all births is compiled by KMCWC and made available to HFSC staff for review, this has not been available from other facilities to date. In some cases, it is not compiled and in others is considered confidential. We will be negotiating to have this information made available to Maternal Child Health Branch, as their staff could then assist in monthly monitoring of screening penetration of births of each hospital.

In summary, the Healthy Start Early Identification Program through its identification of the target population, medical record review, assessment of risk status and referrals to services provides a systematic means of identifying most high risk families of newborns within a target area. It has demonstrated a high degree of success in accuracy of assessment as well as in encouraging families to participate in Healthy Start Home Visitor services.

III. FAMILY SUPPORT HOME VISITING PROGRAM

The Healthy Start Program home visiting services represent an attempt to integrate the best current research and theory on maternal child health and child abuse prevention programs with the strongest and most effective ways of delivering relevant services. This chapter will discuss (A) the basic concepts underlying these services, (B) the elements of service delivery, (C) organization of service delivery.

A. CONCEPTS UNDERLYING SERVICES

There are several concepts underlying the basic approach to service delivery.

- (1) A basic intervention concept is to "reparent the parent"; that is, to allow the client to experience what was missing in his or her own childhood. Dependence is encouraged during this period, followed by a "weaning" process of supporting the parent in activities and skill development for independence. Providing emotional support to the parent(s) increases their ability to trust and make social connections. It also helps them to gain self-confidence and increases their self-esteem.
- (2) Related to this is the effort to expand the family's personal and community support system. These steps to decrease social isolation can have an overall effect of improving the functioning of the family and promoting the mental health of the parents and the infant.
- (3) Paraprofessionals are utilized as home visitors, with the constant support of an experienced professional supervisor with both a strong clinical and supervisory background. A major advantage in utilizing paraprofessionals is their ability to relate well to client families in a non-threatening manner. Workers are also selected for characteristics which facilitate program goals; for example, non-judgmental nurturing attitudes, good life coping skills and preferably successful parenting skills. Much of the success with families is accomplished through role-modelling of successful and rewarding coping and parenting behaviors and is therefore dependent on worker-client relationship.
- (4) At risk families are often difficult to engage in services even on a home visiting basis. For this reason, a creative outreach approach is used, which may be defined as "persistent attempts to engage the client in a voluntary service program when the client exhibits ambiguous behavior related to acceptance of services." Due to their own difficulty in trusting, at risk parents may fear letting the worker into their homes and lives. This program and others have found that persistence often pays off in service acceptance. Families have even expressed gratitude for our persistence, perceiving these efforts as really caring enough to keep trying.
- (5) Parent-infant interaction activities are an important part of intervention. The first six weeks of life are critical, as during this period parents who have "deficits" in caregiving and nurturing skills need early intervention to avoid setting-up negative patterns which become more difficult to reverse as time goes on. We know that if we can help the parents to identify and understand their baby as a unique individual, teaching and modelling appropriate responses to the infant's behavioral cues or signals, there is a greater chance of succeeding in the goal of promoting positive parent-child interactions. The mother-infant acquaintance process in the first few weeks is very important to success in attachment and bonding.

The parent-infant attachment process continues over the first few months of life, as the mother makes the commitment to give consistent care, affection, appropriate stimulation and mediation of the infant's environment, both animate and inanimate. Important factors in attachment include (1) the sensitive period during the first hour after birth, (2) the difficulty of adjustment in the first month, (3) the infant's needs versus the mother's needs, (4) parental satisfaction in role of parenting, and (5) father's support of the mother and also his own attachment to the infant.

The major purposes of parent-child interaction activities are:

- (a) To facilitate bonding and attachment in order to decrease the likelihood of abuse or neglect, as the parent will be more likely to protect and nurture the infant she/he is closely attached to;

- (b) To increase positive emotional, social, physical and cognitive development of the child to ensure that the child will be healthy, will succeed in school and develop into an adult who will be an asset to society;
- (c) To increase positive parent child interaction in order to break the cycle of abuse for the next generation.

The Nursing Child Assessment Satellite Training Program (NCAST), developed in Seattle (Barnard 1978)7, was selected by the project as a major instrument for assessing the status of parent-child interaction and planning remedial interventions, as it appears to offer the most definitive assessment of parent child interaction available at this time. Difficulties encountered in using NCAST are discussed in the later Implementation Issues section. NCAST employs three different scales that permit measurable assessments of parent-child interaction and quality of home environment. The scales adopted for the H.S. Program include Feeding, Teaching and the Home (Appendix II-1). NCAST concepts provide a framework for defining the optimal parent-infant profile and a vocabulary for describing observations. The NCAST scores provide a method for identifying specific deficits in parent-child interactions, which assures interventions are appropriately targeted for individual families, and facilitate monitoring the parent's progress or lack of progress in following the case plan. NCAST scores can provide an indication of the overall parent-child relationship.

Traditionally, professionals in nursing have been trained in NCASTS. However, professionals from other disciplines and experienced paraprofessionals who have demonstrated skills in making observations and exhibiting good judgment are also being certified.

- (6) A vital function in the role of the home visitor is to continue to provide an emphasis on dyadic issues as she works with the parent-infant pair. This is especially important as a natural tendency in some families is to try to focus attention of the home visitor on the needs of the mother often to the exclusion of meeting the needs of the infant. The home visitor must continually re-focus on the interactive process of the mother and infant and not be drawn into spending all of the time on the mother's problems. The unit of intervention in the interactive system, rather than individuals of that system, which may also include a mate and extended family. Because the needs and problems of the family are often great, and also because at least some of the needs of the parents must be met before they are able to focus attention on the infant, striking a balance between the needs of the parents and assuring that the needs of the infant are met during this most crucial period of development is a complex process, but one which must be mastered if the program is to be successful in promoting positive child development.
- (7) All activities of the home visiting component are provided with an understanding of the legal responsibilities related to child abuse and neglect. The relative severity of risk of abuse is continuously assessed from the time of initial identification throughout involvement with the family. If an infant is felt to be in a situation of "imminent harm" or "threatened harm," a referral is made to Child Protective Services (CPS). Guidelines for a Safe Home provide a systematic way to assess the many factors considered in making these CPS referrals (Appendix II-2).

In summary, the approach of the home visitor is to provide a trusting, supportive, nurturing relationship with clients and to maintain that relationship while facilitating development of positive parent child interaction, and the client's parenting and general coping skills, including efforts to develop similar relationships with others.

B. ELEMENTS OF SERVICE

General elements of service have been integrated into the series of home visits provided to families, and others are optional based upon needs and readiness of the family. These elements include basic family support, parent-child interaction, child health monitoring, father involvement activities, and group activities.

(1) Basic Family Support

The basics of family support include providing emotional support to parents, informal counseling and role modelling of family relationships, communications skills, life coping skills and linkage to other needed community services. The worker listens empathetically and non-judgmentally to the parent's concerns and frustrations. The worker engages in a problem solving approach to these issues in consultation with the supervisor. The worker role models problem solving behaviors and activities by doing things for the parent and subsequently provides support and encourages the parent in accomplishing activities for herself. This has been referred to earlier as the "do for, do with, cheer on" approach.

Initially the worker assists in getting the family enrolled in the WIC program and also assures that the infant has a physician. She may transport the family to services as needed and then encourage parents to arrange their own transportation. The worker will assist the family in registering for Section 8 Housing if needed. Other needs are assessed and linkages made as appropriate.

The worker provides crisis intervention and is available to the family by phone or beeper twenty-four hours a day. The worker and supervisor monitor crises to insure that none are missed, that all are responded to appropriately, and that services are not misused.

The worker seeks to work through dependence and lack of trust issues as discussed, and to encourage the family in establishing personal and community agency relationship as ongoing support systems.

Implementation Issues

During the initial phase, there may be unknown factors involved in the case that could pose physical danger to the worker. Examples of this are homes in which active drug dealing occurs routinely, or in which a violent male may object to worker visits or involvement. It is important for the supervisor to be aware of these potential dangers in reviewing case information at intake, and for workers to be somewhat on guard during all initial visits. Workers should be trained in proper procedure, should they encounter a violent or potentially violent situation.

(2) Parent Child Interaction

A basic task in facilitating parent-child interaction is to assure strong initial bonding between the mother and infant. Many at risk mothers are not familiar with the need to or how to establish eye contact with the infant, accompanied by smiling and talking with the infant. The maternal ability to initiate this contact, accompanied by sensitivity and responsiveness to the infant's cues form the basis of interaction between mother and infant. This is the "waltz" described by Kathryn Barnard, which forms the pattern for future interaction and the overall relationship. Therefore, a primary goal of the FSW in the first weeks and months of the infant's life is to support the mother in learning this skill, and in reinforcing the use of this skill in all interactions with the infant. Some of the specific activities which lend to role modelling and reinforcing this behavior include feeding, diaper changing, playing with the infant and consoling a crying infant. Part of this effort includes familiarity with and teaching related to infant states. The worker reinforces positive bonding and attachment at all visits, using available and creating appropriate opportunities.

After firm attachment has been established, facilitation of a range of age appropriate parent-child interaction activities are initiated during home visits, aimed at promoting growth in all aspects of development.

Healthy Start uses a combination of materials which have been organized for use of home visitors in facilitating parent child interaction. These materials contain much information on normal child development and activities to help the mother cope with these stages of development. These include materials from "Mothers and Babies Working Together" (HFSC, 1985)⁸, the Hana Like Parent and Baby Playbook (Parents and Children Together, 1978)⁹ and the HELP Manual (Furuno, Hosaka et al, 1978?)¹⁰. Materials have been

organized by the age of the child, by month, beginning from birth. A curriculum guide explains the sequence of use, identifies priority interventions and also contains additional materials. (See Appendix II-3 for these materials.

Workers will need considerable initial and ongoing training in the use of these materials in order to develop good skills in facilitating parent child interaction. The worker must become very comfortable not only in modelling good interaction, but also in incorporating these activities into the home visit. This involves making a transition from a focus upon the mother to a focus upon the mother-child relationship (dyad). During each visit, it is important to focus first upon the mother and her current situation, as she may not be willing or able to focus upon dyad issues until she has had some opportunity to receive attention herself. Keiki o Hawaii materials are also given to families and reviewed with them.

As noted earlier, NCASTS are conducted for the purpose of assessing quality of Parent-Child interaction. This enables reinforcement of strengths and also clarifies areas needing attention. NCASTS must be conducted by someone who is trained and certified. The training consists of a 16 hour course, NCAST I, which provides an overview of NCAST and its uses, and then a 36 hour course, NCAST II, which covers the administration and interpretation of all scales. Training includes a field practicum in which 20 NCAST scales are conducted on normal families, with the intent of establishing inter-rater reliability. Traditionally, professionals in nursing have been trained in NCAST's. However, professionals from other disciplines and experienced paraprofessionals who have demonstrated skills in making observations and exhibiting good judgment are now being certified.

The NCAST Home Scale is conducted at six months. (See Appendix II-1.) The Feeding Scale is optional as it poses more difficulty as, naturally, it must be conducted during a feeding. The Teaching Scale is conducted at six and 18 months.

A very useful concept provided by NCAST is information on infant states. Helping the parent to identify the infant's state in order to understand implications for caregiving becomes an important part of the work of the home visitor. New information on infants states shows that over about a two hour period, the infant passes through distinct levels of consciousness, or states, such as deep sleep, light sleep, quiet alert, fussy awake, and crying. It is extremely helpful to the parent and beneficial to the baby to teach the parent that trying to feed her baby while it is in "light sleep" will lead to failure and frustration, while learning how to rouse the baby to a "quiet-alert" state will lead to a more successful feeding experience. It also is very helpful to the parent to know that the baby is likely to awake and cry about every two hours, needing to be fed. This allows the mother to plan her own time, including sleep. For some parents, it will be of value to show them how to plot out their baby's sleep-awake patterns on a chart provided by NCAST. NCAST concepts provide clear information on infant behavior which can alleviate the parent's anxiety and give the caregiver a sense of competence in infant care. This knowledge in itself can greatly relieve the stress of having a new baby to care for and can give the mother confidence in her parenting capability, which will raise her self-esteem.

Implementation Issues Re Parent Child Interaction and Conducting NCASTS

The mother's problems will often seem pressing, and the mother is able to articulate her concerns and needs. The pressure of the mother's problems can easily overshadow plans for working on parent child interaction. While on occasion, and initially with more difficult cases, family crisis may make it impossible to work on dyad issues, it is important for the worker to keep the overall goals of intervention in mind and learn to allocate time accordingly.

Families may be apprehensive about having NCASTS done, which may result in frequent no-shows for these visits. Also, if the infant is sleeping or has just been fed, the Feeding Scale cannot be done. This is a drain on worker time, and when consultants are involved can become costly.

(3) Child Health Monitoring

The first few years of life contain the most rapid and critical stages of human development. Therefore, monitoring of key health and growth indices is an important program component. The Healthy Start program monitors health indicators and provides support services and advocacy to assure that the infant receives all needed services. The project has established a computerized health-monitoring system to track these indices and to follow-up on missed appointments, and identified problem areas.

As of October 1989, the home visitors conduct the Revised Pre-Screening Developmental Questionnaire (RPDQ) routinely for all infants to identify those infants needing further developmental assessment (Frankenberg, 1976). Samples of these forms and instruction materials are located in Appendix II-10. Workers provide transportation to physician visits and serve as advocates or liaisons between the family and the health-care provider. There should be a designated staff person who will be responsible for obtaining, recording, tracking child health information and monitoring interventions. Activities aimed at promoting child health and maximizing potential for development involve the supervisor, worker and the pediatrician who provides a medical home. These activities are primarily designed to assure that the infant has a pediatrician or primary health care provider and receives regular well-care monitoring according to the recommendations of the Hawaii Chapter, American Academy of Pediatrics guidelines, in addition to illness care.

Home visitors routinely conduct the RPDQ at two months and ten months, and review findings with the supervisor. The pediatrician is apprised of any problem areas identified, which may indicate the need for conducting a full DDST (Denver Developmental Screening and Testing) and other diagnostic testing. The home visitor serves as an advocate or liaison between the parent/infant and the health care provider and community resources in assuring that follow-up occurs. The home visitor also educates the family regarding the need for and purpose of child well care. One finding of our work in this area to date is that high risk families often do not perceive well care visits as having value and importance, particularly in light of other pressures on the family.

Implementation Issues

Implementation of an effective child health component has been difficult due to lack of manpower in the present staffing pattern of Healthy Start. Managers lack time to focus on this aspect of case management. Workers are pre-occupied with family crisis and are often less comfortable with this intervention area.

(4) Father Involvement Activities

For many families, the father presents serious risk factors, for example, where spouse abuse, alcoholism, and/or tendency to violent outbursts are involved. For these families intervention with the mother is clearly not enough, and in some cases does not need to be the main focus. Direct intervention with the father is needed. The Ewa Healthy Start program has been fortunate in having a very effective male worker who works in a team approach with the female home visitor with families in which the male poses serious risk. The male worker works with the father in order to reduce his high risk characteristics/behavior. It is important for the staff to understand the critical role of the father in supporting the mother and the nurturing of the infant. A mother who receives no support from the father in her mothering role may become unmotivated and ineffective in parenting. Many of the basic needs identified for mothers are also true for fathers such as the need for a support network which includes family, friends and the community. Specific and separate interventions should be planned, included in the case plan, implemented and evaluated in the same way as maternal interventions. Common interventions include helping the father to feel more comfortable interacting with the baby, informal counselling for the father regarding anger management and employment interests, and assistance in getting a job training.

Implementation Issues

Notable lack of participation by fathers in the program has not been uncommon. Frequently staff have experienced resistance to father participation that has actually come from the mother. She may tell staff that the father is "too busy" or not interested. She may be afraid that he will be angry at what he may consider an intrusion into his affairs and retaliate at her. Or in fact she may not want him to be directly involved in the program. She may fear he will expose her "shortcomings" to the worker, or that he will get more time and attention than she from the worker. It requires clear direction and planning on the part of staff to overcome these barriers to father involvement.

(5) Client Group Activities

Characteristics of at risk families, their inability to trust, social isolation, poor self esteem and poor communications skills, make it highly unlikely that parents will readily agree to attend groups upon entrance to the program. Also, their multiple problems may initially interfere with their ability to internalize and apply didactic information. Thus, parenting classes alone are not an effective intervention in preventing child abuse and neglect among high risk families. After the home visitor establishes a trusting relationship and some of the major stresses, such as housing and financial crises, are reduced, the parent may be ready for group experience. It will be important to pick up the parent and take her to the group, perhaps several times, while supporting her increasing skills related to group experience.

Responsibility for organizing groups may be assigned to one or more home visitors with a particular interest in this area, or may be rotated among workers. A suitable meeting place should be identified that includes a play area for the children as well as space for group activities. Family Support Workers or volunteers should be on hand to assist with child care so that parents are able to participate freely in activities.

Socialization and skill building groups seem to be the most attractive to clients/ Monthly outings to areas of interest in the community are especially popular, as many clients have minimal opportunities to venture beyond their immediate neighborhood. Other successful group activities have been craft and cooking classes, toy making and exercise. Speakers from relevant community resources, such as domestic violence and job training programs, can provide information and stimulate discussion. Groups may be open to all clients or more narrowly focused. Teen parents may respond better to groups composed of peers, or clients who share an ethnicity may enjoy the opportunity of being with others of the same culture.

Implementation issues

Group leaders must be prepared to be flexible! It is typical for group size and membership to vary substantially from week to week. Many clients will not be ready to attend a group until they have been with the program for several months. Repeated invitations, reminders and transportation are a necessity. Snacks during group can be an important draw and are seen as nurturing by clients.

C. ORGANIZATION OF SERVICE DELIVERY

The following outline has grown out of our attempt to provide a cohesive structure for the development of the family support relationship. We have found that though most of the elements we have described were present in our programs, there was a need to articulate more clearly our expectations of Home Visitors, that is, specifically what they were expected to do and when. This outline now provides us with a format with which to guide workers new to their role. It also acts as a road map for experienced workers who may be having difficulties with a particular case.

Given the variability that naturally and regularly occurs in family support visits, it is important to allow for maximum flexibility in structuring the Home Visitor. However, we have provided detailed outlines for initial and final visits, since specific issues should be addressed during these pivotal visits. These should bring a sense of clarity, direction and completion for both client and worker.

We have identified three phases in the family support home visiting process, initial, middle and final phase, with distinct tasks related to each.

I. Initial Phase

As mentioned earlier, trust building is an overriding concern for this period. The Home Visitor tries to make an initial visit in the hospital or make a phone call before discharge to start this process and schedule the first home visit. Next, the worker will establish a record for the client. (See Appendix II-4 to II-11, case record forms.) She must be sure to obtain all paperwork from the EID worker, including the intake record, psycho-social summary, and discharge form, as well as any verbal information from the EID worker. The EID supervisor also discusses the case with the H.S. manager. The H.S. manager and Home Visitor will meet to discuss the case and plan the first home visit.

An important early step is to clarify goals, expectations, and responsibilities of the worker and the client, as part of building trust.

Defining the purpose, frequency and duration of the home visits helps to build a sense of reliability and trust with the client. While this is being established, the home visitor works on developing mutual respect and the open exchange of information, sharing thoughts and feelings and facilitating the active participation of the client in the program and its activities. The worker builds trust by demonstrating consistency, by listening to the parents in a non-judgmental way, by offering assistance with problems such as housing, obtaining formula for the baby and food supplements for the family, and in general by being very supportive. A major area of focus is on reparenting the parent and personal skill building. Initially, the worker encourages the client to be dependent, as discussed earlier.

The worker will offer to do things for the client, such as take her shopping or to physician appointments, help locate adequate housing, or fill out application forms. When the supervisor and the worker feel the client is ready to begin to do more for herself, the worker will do things with the client, and then support the client in problem solving, transportation, and so on. Project staff have referred to this process as the "do for, do with and cheer on" process. Role modelling is an important way in which the client learns. Learning how to do things for herself is an important ingredient in positive self-esteem building.

NCASTs are conducted during the initial phase, during the first four months, usually after trust has been established.

a. Goals for the Initial Phase

1. Establishing rapport.
2. Assessing concrete needs (food, clothing, housing, etc.) of the family, organizing these, and responding to them as well as possible.
3. Assessing parent/child interaction and bonding (or primary caregiver/child interaction and bonding). Assessing the level of organization/disorganization, and strengths and weaknesses in the larger family structure. Assessing the supports, or lack thereof, from the community network.
4. Developing a Case Plan with the supervisor: identifying relevant high-risk factors, therapeutic goals with respect to these factors, and specific interventions that are to be used to accomplish the goals (see Appendix II-6).
5. Making inter-agency referrals (in discussion with supervisor) when appropriate.

b. Initial Home Visit Guidelines

1. Make an appointment for a home visit, either at your hospital visit or by phone before hospital discharge.
2. When making the first home visit, be warm and supportive in your manner. At the same time, be clear and honest about your role: you are working with them to help them deal with stresses

- in their life and to develop a rewarding relationship with their new child. Being clear and honest from the beginning sets up trust and understanding in your relationship.
3. Find out who lives together as a family unit (mother, father, grandmother, other adults, newborn, toddlers, older children, etc.). Determine which family members are significantly involved in the caretaking of the newborn. If these family members are not at home at the time, ask to meet them at your next visit, or as soon as feasible.
 4. Your primary contact/relationship will be with the mother, or the mother and father, or with mother and grandmother in some cases. Ask how she/they are adjusting to the newborn.
 5. Observe parent/child interactions; that is, the way she/he handles and holds the baby, the way she/he responds to the baby, the eye contact she/he makes with the baby, and the way the baby responds to and reciprocates in the same terms.
 6. Ask about the baby's sleep patterns; that is, how long and well he/she sleeps, how many times a day he/she wakes, whether the cycles of sleeping and waking are regular.
 7. Ask about the baby's feeding patterns; that is, what the baby is fed, how often, in what quantity, and what he/she seems to enjoy.
 8. Ask about the baby's activities, whether any particular activities are done with the baby to stimulate him/her, how he/she responds to them, what particular activities he/she seems to like.
 9. Ask what pleasant characteristics the parent (and any other significant adult in baby's life) sees in baby; for example, what things about him/her make him/her happy.
 10. Ask who the parent/primary caregiver gets support from in day-to-day life, and how she/he gets or makes time for herself/himself to relax.
 11. Ask how she/he typically responds to baby and to other significant family members when stress builds up, and how baby and other significant family members respond to her/him.
 12. Ask what daily chores she/he does for the baby and household and what gets left undone.
 13. See if there are adequate provisions (food, clothing, toys) for the baby.
 14. If needed, make a list of services (DSSH, WIC, Foodstamps, etc.) that the family needs to be linked up to.
 15. Summarize in your mind what seem to be the most urgent needs for the family on the basis of the information gathered and tell them that you will be working on those particular things immediately. Ask if there are any questions/doubts/feelings and respond to them, using your best judgment. If you are uncomfortable about responding to any particular thing, say you need to get back to them about it, and do that after consulting with your supervisor.
 16. Set up a regular time for a weekly home visit with the family. You may not be able to ask all of these questions at the first home visit, but you should be able to gather this information in the first few meetings. Use this information to develop a detailed Case Plan with your supervisor. The Case Plan will enable you to follow through and provide support to the family in all of the needed areas.
 17. Give the family some token of the beginning of the relationship, such as a photo of the baby or small baby gift.

Families who do not respond to initial efforts of the Home Visitor to schedule an appointment, or to complete the first home visit are put on Level X follow-up. This means that a visit will be attempted to the family every month for three months. When no personal contact is made, the visitor will leave a note or make a phone call to the effect that she stopped by to see them, hopes that things are going well, is available should they need assistance, and looks forward to seeing them later. The supervisor will consult with the worker on ways to make contact with the family.

c. Case Plan

After initial trust has been established, development of the case plan begins. Specific goals and objectives provide structure to the work of each home visitor. Because changes and improvements in parenting skills and social behaviors are painfully slow, and sometimes barely perceptible, it is important to document each goal to be achieved, the activities planned in order to attain the goal, and activities to be conducted. This is done via the plan (See Appendix II-6).

In developing the case plan, information gathered from the initial hospital assessment and from the first month of home visits is related to the needs of both the parents and the infant. Baseline NCASTS are conducted at designated intervals and data obtained is included in developing the case plan. The problems identified are listed at the left side of the form. The worker and the supervisor decide which problem areas are to be addressed initially. Care must be taken not to try to address too many problems at once and to set priorities which will result in a practical case flow. For each problem area selected, objectives and specific activities are defined. Home visits should focus upon the case plan objectives. The case plan is formally reviewed every four months to identify progress towards objectives, reassess interventions that are not working and formulate new plans and interventions. Decisions about level changes may be made at this time. Following are some examples of common plan objectives.

- (1) Objectives for the mother might include, but not be limited to:
 - a. To increase use of social support system (individuals and agencies) as reported by client and/or home visitor.
 - b. To increase use of child care services in order to provide relief from continuous child care responsibilities.
 - c. To increase coping/problem solving skills in order to reduce frustration and disruption to parent-child interactions.
 - d. To keep all well-baby appointments as evidenced by health records.
- (2) An objective for the baby may include but not be limited to a demonstration of adequate emotional, social, physical and cognitive growth and development.
- (3) Parenting objectives may include but not be limited to:
 - a. To increase parenting skills, as measured by NCAST Feeding, Teaching and HOME scales administered periodically and compared with initial ratings.
 - b. To increase parent-child interactions and involvement with each other as observed by the home visitor.
 - c. To enhance parents' knowledge of child growth and development as evidenced by NCAST scores and home visitor observations.
 - d. To enhance parents' ability to provide a safe and nurturing environment for their child as reflected by adequate scores on the HOME scale, review of the "Guidelines for a Safe Home" (Appendix II-2), and observations of the Home Visitor.
 - e. To encourage avoidance of restrictive/punishment care giver patterns as evidenced by NCAST Subscale scores and home visitor observations. Interventions are defined in the case plan and are aimed at intervening with the characteristics and problems which cause the family to be at risk.

II. Middle Phase

This phase includes the major intervention time period, with many visits. Specific content for each visit is determined in case management meetings.

A. Home Visitor Goals

1. Intervening on the basis of the case plan in the identified areas of concern. The focus of the interventions will primarily be on the parent/child dyad. In the course of the outreach visits, however, interventions

may sometimes be designed to include the larger family structure, if that is warranted. Some interventions may also be designed to include the larger community network or provide appropriate linkages to it.

2. Evaluating effectiveness of interventions, with supervisor, and modifying the case plan if necessary on the basis of new information that emerges. Identifying problem areas in working with cases and trying various alternative approaches in order to resolve the problem.
3. Adjusting the frequency of home visits based on the progress of the family in meeting case plan goals.

B. Middle Stage Home Visitor Guidelines

There will be a great deal of variation in middle stage visits, as the home visitor will need to respond to events in the family as they occur.

These may include crises such as spouse abuse, loss of housing, or illness of the baby or family members. However, with intervention, the stability of the family usually increases over time. During periods of stability, interventions can focus more directly on the mother-infant dyad. The course of such a visit may be roughly as follows.

1. The worker spends some time talking with the client, catching up on events in her life since the last visit was made. They discuss any progress she has made toward her personal goals.
2. Inquire about the baby. What kinds of things has she/he been doing recently? Does the mother have any concerns about baby's health or development? This is a good opportunity to follow-up on things that have been discussed at previous visits such as feeding or consoling techniques.
3. Provide appropriate developmental information. This might include handouts on motor, language or social development, health and safety or nutrition. Review and discuss the information with the client.
4. Introduce an activity from the Parent-Child curriculum and help the client to try it out with her baby.
5. Make plans for the next visit and encourage client to call if she needs assistance between visits.

Throughout the visit the support worker has an opportunity to teach through role modeling. Support Workers need to remain flexible, finding ways to include other children and family members when appropriate and expecting and adapting to interruptions.

III. Final Phase

During the Level IV promotion planning process, the client and home visitor, in conjunction with the supervisor, have worked together to establish goals and priorities for the future for the client and her/his family. They identify the resources available to achieve these goals. The visit to introduce Level IV quarterly visit status serves as an opportunity for the client and home visitor to summarize the work they have done together. This visit should be the culmination of the discharge planning process.

A. Final Phase Goals

1. Assessing the family's progress on the Case Plan goals.
2. Making the decision, with the supervisor, to move the family to follow-up status.
3. Preparing the family (and other agencies where relevant) for discharge.
4. Conducting a planned promotional home visit.

B. Guidelines for visit to promote Client to Level IV

During the course of the visit the following should occur:

1. Ask the client to describe the progress she/he has made since entering the program. Offer your perceptions of the clients progress. Areas to cover might include: parenting skills, problem solving abilities, positive changes in the client's life circumstances.
2. Ask the client to summarize the developmental progress that she/he has observed in her/his child. Offer your perceptions of the child's progress, emphasizing the importance of the client's contribution to the child's development. Areas to cover include: social-emotional development, motor skills, cognitive skills, self-care skills.
3. Discuss the client's hopes and plans for the future, and the steps she/he will take to achieve her goals.
4. Establish a quarterly follow-up schedule with the client and let her/him know that you are available should any crisis occur.
5. Give the client a token of the culmination of your relationship, such as a certificate or a photo of the client and her/his children.

Level IV Follow-up

A visit is made to the family every three months. The purposes of these visits are:

- (1) To assure that progress has been maintained and the safety and well being of the child is assured.
- (2) To provide information and anticipatory guidance related to the current and upcoming developmental phases of the child.

The worker should inquire about issues and planned activities reviewed at the last visit, and also note or ask about any changes in family activities or relationships, such as a new boyfriend, difficulty in reaching mother, and so on.

Observe the child for growth and development appropriate to its age. Discuss appropriate developmental issues, offer appropriate parenting materials.

Conclusion

Clearly there is much to be done in the area of theory and practice of family support. This is a unique field in that it straddles the borders of a personal and professional relationship. For this reason, the potential in this field for impact on clients' lives is great. We view this work as a beginning step in developing a model of practice for Family Support Workers.