

LINEAR LIBRARY
C01 0074 7271



**THE QUALITY OF MOTHER-INFANT INTERACTIONS IN
KHAYELITSHA**

PUMZA CORDELIA SAKASA

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN
CLINICAL PSYCHOLOGY**

**UNIVERSITY OF CAPE TOWN
DEPARTMENT OF PSYCHOLOGY
FACULTY OF SOCIAL SCIENCES AND HUMANITIES
1999**

SUPERVISOR: PROF. LESLIE SWARTZ

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

ABSTRACT

Little research has been done in the developing countries around the issue of postpartum depression and its effects on the face-to-face mother-infant interactions. Murray et al. (1996) conducted a research study of this kind in Britain. Results obtained in the study were used for comparisons with those of the current study, focused on investigating the quality of the face-to-face mother-infant interactions in Khayelitsha, a South African informal settlement. Subjects were derived from two adjoining areas of Khayelitsha that is, SST and Town II. Recruitments were done using a number of strategies such as visiting the local clinics and hospitals as well as their homes. Permission to do so had been negotiated prior the inception of the study. Structured interviews were conducted to screen depressed mothers from the non-depressed. The mental state of the recruited 147 women was therefore assessed and the quality of their engagement with their infants was determined through video taped sessions. Analysis of the data was done using Student t-tests. The point prevalence rate of DSMIV major depression was found to be 34.7%. Maternal depression was associated with insensitive engagement with the infants as well as with poor emotional and practical support from the spouse. The rate of depression in Khayelitsha was found to be of major concern for the future of the mothers and their infants. Compared to their British counterparts, the Khayelitsha mothers-infant interactions portrayed more severe disturbances in relation to maternal sensitivity and infant engagement.

ACKNOWLEDGEMENTS

I would like to give thanks and praise to the Lord for all the strength and love He has shown me.

I thank my supervisor, Prof. Leslie Swartz for his support and guidance. I am also thankful to Cathy Hutchings for her valuable remarks and to Mr. Frank Bokhorst and Dr. Gillian Finchilescu for patiently guiding me through my statistics.

To my colleagues, Tammy Gelman and Mark Tomlinson, I say thank you for everything. To Deborah Platen and Gill van Zyl, I am very grateful for just being there and saying the right things when I was feeling down.

A big thank you to my brother Zolani for being everything I needed during this trying time. Thanks a million!

Most importantly, I would like to thank my parents, my son Dexter and my husband Vusi for all their love and unfaltering support. The completion of this thesis owes a lot to their understanding, patience and willingness to compromise God bless you all!

I would like to thank all my friends, especially Nolitha Mtini for selflessly allowing me to invade her space and use her computer. Siphho Vilakazi, where would I be without your assistance. Thanks a lot guys!

Lastly, but not least, I would like to thank the mothers and their infants for participating in the study. I would also like to thank the assessors, Ms Nosisana Nama and Ms Nomalanga Mosala, for a job well done!

TABLE OF CONTENTS	Pages
ABSTRACT	1
ACKNOWLEDGEMENTS	2-3
TABLE OF CONTENT	4-5
CHAPTER 1: INTRODUCTION	6
1.1. Introduction	6
1.2. Background to the study	7-8
1.3. Chapter outline	9
CHAPTER 2: LITERATURE REVIEW	10-19
CHAPTER 3: METHOD	20-31
3.1. Population and Sampling	20
3.1.1. Khayelitsha sample	20-23
3.1.2. British sample	23-24
3.2. Procedure	24-25
3.3. Instruments	26-31
3.3.1. Global Rating Scales	26-28
3.3.2. Edinburgh Postnatal Depression Scale	28-29

3.3.3. Structured Clinical Interview	29-30
3.4. Training and coding	30
3.5. Personal comments on the training course	30-31
CHAPTER 4. : RESULTS	32-40
4.1. Cambridge Results	32-34
4.2. Khayelitsha Results	35-37
4.3. Comparisons between the Khayelitsha and the British samples	38-40
CHAPTER 5. : DISCUSSION	41-43
CHAPTER 6. : LIMITATIONS AND RECOMMENDATIONS	44-46
REFERENCE LIST	47-51

CHAPTER 1: 1.1 INTRODUCTION

There have been numerous studies of the prevalence of postpartum depression, its nature and risk factors in Western countries. However, few such studies have been done in this topic, in developing countries, including South Africa.

This study aims to determine the quality of mother-infant interaction 2 months after birth in Khayelitsha, an urban township outside Cape Town. Comparison will be made with the prevalence rates reported in studies conducted in Cambridge, Britain by Murray et al. (1996). The purpose is to investigate any possible differences across contexts together with disturbances in mother-infant interactions characteristic of depressed groups in disadvantaged populations.

According to Murray et al. (1992) the 2-month period is developmentally significant both to the mother and the child because certain developmental issues such as basic trust and attachment, language acquisition as well as cognitive development start taking shape during this phase. Winnicott termed this stage the phase of “primary maternal preoccupation” (Ainsworth et al. 1978), that is, the maternal psychology is ordinarily adapted to the infant’s functioning. In other words, mothers are supposed to be aware of the infants’ needs and communications. They are meant to be in tune with the infants’ signals and can respond either appropriately or inappropriately to such cues. On the other hand, infants are highly sensitive to the quality of their interpersonal contacts. They are conscious of their environment and by this age have adapted to human care and responses.

As the mother largely constitutes the infant's primary environment, it is important and understandable to become concerned about the mother's psychological well being. Consequently, as there is a high rate of maternal depression during this period (Murray and Cooper,1997), researchers are currently focusing on the course of the child's development and the mother's wellness in relation to each other.

1.2: BACKGROUND TO THE STUDY

Mothers and their infants between 2-5 months of age commonly engage in very intense interpersonal interactions. However, some differences in the interpersonal behaviours of the mother and the infant such as maternal responsiveness and infant's communicative style have been reported between Western mother-infant relationships and those from the other social and cultural groups by researchers interested in cross-cultural studies (Field et al. 1985). After reviewing a number of cross-cultural studies Richter (1995) found that most of the researchers suggest that African mothers behave differently with their infants from Western mothers. These observations have raised many questions and stimulated certain interests about the early development of infants and the nature of the interpersonal experiences in mother-infant interaction. The current investigation of the quality of the mother-infant face-to-face interactions in Khayelitsha has been prompted by such arguments and an interest developed during a training course for the use of the Global Rating Scales¹. Discussions on maternal and infant behaviours in South Africa and

¹ This is a scale used to rate maternal and infant behaviours on a series of 5 point scales. It will be discussed in Chapter 3.

recommendations by the members of the Winnicott Research Unit², in particular Prof. Cooper whom we eventually worked alongside in this study, encouraged the need to determine and identify any cultural differences together with disturbances within the mother-infant interactions of Khayelitsha compared with those of the British population. Most importantly there has been little research done around issues of mother-infant interactions in these developing countries, including South Africa. The current study therefore looks at the way mothers interact with and respond to their infants and is concerned partly with the question of whether due to the socio-cultural, economic and political factors these mothers of the developing countries have been exposed to; they would be more likely to present with depression than those of the first world countries.

The study will investigate the quality of mother-infant interactions in Khayelitsha in comparison to a British sample population. The mental state of the participants will be assessed using the Edinburgh Postnatal Depression Scale (EPDS) and the Structured Clinical Interview for the DSM-IV diagnoses (SCID). These will be followed by videod sessions of the mother-infant interactions which will be rated using the Global Rating Scales. All instruments are described in Chapter 3.

² This is a unit at the University of Reading, which focuses on researching issues around mother-infant relationships. Prof. P. J. Cooper and Prof. L. Murray head it.

1.3 CHAPTER OUTLINE

Chapter 1: - includes an introduction and a brief overview of the study, outlining the motivations and reasons for undertaking this study.

Chapter 2: - literature pertinent to the study is reviewed. This literature review discusses issues relating to the mother-infant interactions in general. It also focuses on depression and its effects on the mother-infant interaction. Issues relating to the impact of social adversity, particularly in Africa, are examined.

Chapter 3: - outlines the methods of research. It considers issues such as population and sampling, research procedure and site of the research. It also examines the instrument used in research, and provides a brief account of the actual training in the use of the Global Rating Scales.

Chapter 4: - describes the results of the study. These results outline the differences between the depressed and non-depressed mothers of Khayelitsha. They also provide a comparison between the two sample populations – British and Khayelitsha depressed and non-depressed groups of women.

Chapter 5: - discusses the results obtained in the study.

Chapter 6: - discusses possible implications as well as limitations of the study and recommendations are made.

CHAPTER 2: LITERATURE REVIEW

Since the early 70's researchers from a variety of disciplines and countries have been studying the social dynamics of early mother-infant interactions. Several studies have been conducted in the European countries to investigate the impact of maternal postnatal depression on the mother-infant face-to-face interactions. Many researchers have shown that depression has a profound impact on many facets of an individual's interpersonal relationships and behaviours. Depressive disorders have been found to be the leading psychiatric disorders among women, particularly those who have recently given birth. Recent epidemiological studies done in Britain, have consistently found that approximately 10-15% of women suffer from an episode of non-psychotic depression in the three months following delivery (Cox et al. 1987; Murray et al. 1993). In fact, "women in the postpartum period are nearly twice as likely to be depressed as at any other time in life" (Ruttenberg et al. 1997, p. 366). This does not refer to or include postpartum blues or postpartum psychosis. Postpartum blues has been defined as a relatively mild, transient and common emotional disturbance which occurs in the first week after birth and is characterized by crying, confusion, mood lability, anxiety and depressed mood. These may last for a few hours to a few days and have very few negative results. On the other hand, the Penguin Dictionary of Psychology (Reber, 1985) describes the concept of postpartum depression as "any acute depression occurring within the three months following childbirth" (p.560). If, according to the dictionary, psychotic symptoms are present such as loosening of association and marked illogical thought the term postpartum psychosis is then used. This is a severe and relatively rare psychiatric disorder. It is often affective in

nature and characterized by delusions, hallucinations and gross impairment in functioning (Cox, J.L. 1983; Murray et al. 1993). According to Murray et al. (1993) episodes of postpartum depression occurring in the postnatal period show the full range of clinical features including social withdrawal, irritability, anxiety, excessive guilt, helplessness, poor sleep patterns, hopelessness, fatigue and impaired concentration, as well as persistent low mood. These are symptoms that could lead to gross impairment in functioning. According to Lemaitre-Sillere and Bennett (1998) maternal depression is a cause of major distortion in the infant's ability to establish an "...ego- self dialogue with the unconscious, ...a dialogue whose development is essential for the infant's growth" (p.509).

Ainsworth et al (1978) stated that "the depressed mother is the primary environment of the young child...the behaviours and mental status of the depressed person are all potentially interfering with the functions and responsibilities of a caregiver and with the development of a good affective relationship with the child" (p.78). In other words, infants are most likely to be vulnerable to an environment created and offered by a depressed primary caregiver since they are entirely dependent on them during the early months. In a longitudinal research study done in Britain, Murray et al. (1992) has confirmed that postnatal depression affects communication between the mother and the infant at 2 months. They go on to state that it does not only affect the capacity of the mother to understand the infant, but especially the mother's ability to engage actively and pleasantly with the infant. Indeed, according to Donovan et al. (1997), "a depressive mother cannot sensitively engage and respond to the demands of the infant particularly if the infant cries a lot and is unable to indicate clearly whether it is satisfied or not" (p.510). Donovan et al.

(1997) and Lemaitre-Sillere and Bennet (1998) note that such infants can easily become annoying to their mothers, who may feel obliged to satisfy them and end up blaming themselves for not being able to do so. The result could be a constant repetition of unpleasant and ineffective mother- infant interactions. This, according to the authors, tends to increase anxiety and a sense of guilt that further incapacitates the depressed mother to engage or respond appropriately.

According to Cox et al. (1982) and Wrate et al. (1985) a depressed mother tends to become excessively anxious about the infant's health and often doubts her ability to be a "good enough parent". Such parents, according to Cox et al. (1982), are often troubled by their inability to live up to their own high expectations of motherhood, therefore causing family discord. Furthermore, Wrate et al. (1985) argue that emotional and behavioural problems in children may therefore largely be "the function of both the infant as well as the mother" (p.624) and are always "illustrative of stresses within the family setting" (p.625). These authors illustrate that the most important component of the mother's behaviour is "its affective quality and its contingent relationship to the infant's behaviour". They assert that the mother's positive expressions are essential to the quality and organization of the infant's behaviour. In one of their mother-infant studies, they discovered that at 3-6 months the infants were more likely to become positive after their mothers showed positive behaviours such as affection, warmth and acceptance. Thus, the mother's positive expressions provide a frame within which the infants have an exquisite sensitivity to the quality and reciprocity of the mother's emotional response.

Studies indicate that there are fairly consistent patterns of both maternal and infant behaviours during these mother-infant interactions, and that the interactions seem to follow a well-defined developmental course. According to Richter (1995) and Stern (1995), the early mother-infant face-to-face interaction provides a stage for both the mother and the infant to “mirror” each other’s behaviour and emotional state. In other words, the mother-infant interaction is a structural frame within which the mother and the infant can communicate and channel their interpretations of each other’s behaviours and emotional state. Through this period of interpersonal exchange, the mother is intensely devoted to identify and fulfill the infant’s needs; thus enhance the infant’s sense of self and secure attachment. Basically, these early interactions help to “...establish conditions of self awareness and lay down the communicative foundations for language development” (Richter, 1995, p.6); as well as “establish a social basis for subsequent cognitive development” (Meins, 1997, p.130).

In a recent study which will be directly used for comparison in this study, Murray et al. (1996) found that depressed mothers were less sensitively attuned to their infants and were less affirming and more negating of the infants’ experience compared to the non-depressed mothers. Both Field et al. (1988; 1990) and Murray et al. (1996) postulate that infants of postnatally depressed mothers show “less frequent positive and more frequent negative facial expressions than those of the non-depressed mothers” (p.2512). These infants, according to Field et al. (1988) either vocalize more or are avoidant and withdrawn. They look at their mothers less and show more self-directed activity. A notable feature in these studies was the “identification of different profiles of disturbed

infant behaviour characterized predominantly by avoidance and fussing”(Murray et al. 1996). As such, researchers that have used Ainsworth’s Strange Situation have also discovered that insecure attachment was more frequent in infants whose mothers had a history of depression (Murray et al. 1992; Shaw et al. 1993). During observational studies done by these researchers it was discovered that insecurely attached infants were found to be quite avoidant and resistant to the mother particularly when reunited after a brief separation. In other comparative studies done by Cox et al. (1987) infants of depressed mothers were found to show more behavioural problems and difficulties in expressive language than those of the non-depressed mothers.

Arguments by Cogill et al. (1986), Murray et al. (1993, 1996) and Stein et al. (1991) purport that depressed mothers are less likely to vocalise when dealing with their infants. They tend to make few suggestions and use explanations minimally. These mothers tend to ignore their infants’ requests; and are less likely to pick up cues from their infants. In essence, these depressed mothers are found to be unable to sustain attunement. Similarly, many researchers have found that depressed mothers exhibit less happy mood compared with non-depressed mothers. Stein et al. (1991) and other researchers argue that depressed mothers “brood a lot, are self-absorbed and often preoccupied”(p.48). Even though depression manifests in a range of ways, according to Rutter et al. (1997), “disorganised affect and affective distress are shared features of depression which inevitably enter the rearing environment of the depressed mothers and their infants” (p.366).

Field and colleagues support the above-mentioned idea that the emotional state of the mother has an effect on how the infant is raised. They found that depressed mothers expressed “more punitive and controlling attitudes toward child rearing” (Field et al. 1990, p.1571) and felt less in control of their own lives. Cohn et al. (1989) also stated that depressed mothers are often unresponsive and unavailable to their infants’ needs. To sum this up, Bowlby, (cited by Ainsworth et al. 1978), suggested that depressed mothers are often “half present”, and this could possibly mean that they are physically present and emotionally absent. According to Murray et al. (1992) such adverse effects of postnatal depression occur despite the fact that “in the majority of cases the depressive episode has remitted by 3-6 months postpartum” (p.545).

A study conducted by Stein, et al (1991) supports the conclusion that a history of postpartum depression has an effect on later mother- infant face-to-face interactions. Stein et al (1991) and Cooper et al. (1988) have argued that there is a connection between maternal depression and the disturbances in the mother–infant relationship which in turn has a tremendous impact on the infant’s cognitive and emotional development. Recent findings have indicated that “children of depressed mothers are at increased risk for emotional, behavioural and language development problems” (Ruttenberg, et al 1997, p. 374). Several studies support this notion and researchers have attempted to relate individual differences in intellectual competence and language development in infants with differences in the quality of mother–infant relationship (Brighi, A. (1997) and Schaffer (1977). It is because of these debates and findings that some attention has had to be

directed toward the examination of early mother–infant interactions, as they might be assumed to be the seeds to problems that occur in later development.

Consequently, such findings have raised many questions regarding the nature of depression particularly when there is little evidence for a biological etiology. Research has highlighted that previous depression is a risk factor for postpartum depression especially when paired with obstetric complications. However, the marked disturbances in the mother-infant interactions as well as in the infant’s cognitive and emotional development cannot be driven by maternal depression alone. Certainly, maternal preoccupation with the current difficulties independent of depression may have an effect on the mother’s ability to respond sensitively to the infant. This statement supports Cooper’s (1998/1999) views that the occurrence of stressful life events in general and unemployment in particular, the presence of marital discord and the absence of personal support from the spouse, family and friends have all consistently been found to play a contributing role in increasing the risk of depression postpartum. In other words, personal and social adversities have, indeed, an effect on the way the mothers respond to their infants.

As it is, it became obvious that the overall development of an infant is enhanced by the presence of an adult in an environment constituted by particular as well as unique cultural and social elements. As such, Stern (1995) argues that the socio-economic status, malfunctioning social supports, the nature of the intervening mental health care system and the level of parental education and culture all have a powerful influence on the mental state of the infant. This influence, according to Stern (1995), is “extremely meaningless...”

(p.60) during the early months of the infant's development. However, when it is "...translated into the language of action within the interaction (by the mother)..."(p.60); certain behaviour patterns that boost cognitive, language and social development become noticeable. Once the mother and the infant are engaged within the interaction, particular cultural, social and interpersonal elements are also transmitted and it is during this period that differences in style become evident. In retrospect, Cohn et al (1989) have emphasised that the face-to-face mother-infant interactions are a setting for the infant's early socialisation experience and are particularly significant for the infant's identity development.

Based on these facts and arguments there is no doubt that the primary caregiver is centrally important to the infant's overall development. In many cultures the mother constitutes the infant's primary environment and mediates his/her experience of the non-social world particularly in the early months. According to Ainsworth et al. (1978), it is generally acknowledged that "the relatively long periods of infantile helplessness characteristic of human beings together with a relative lack of maturity imply a sense of vulnerability during which the infant requires protection" (p.76). Bowlby, (cited by Ainsworth et al.1978), argues that the infant is nonetheless equipped with a "relatively stable behaviour system that operates to promote sufficient proximity to the principal caregiver" (p.79). In turn the mother instinctively responds to the infant's behavioural cues and provide the necessary protection. This implies that there is a relationship of reciprocity between the mother and the infant. However, individual differences in patterns of mother-

infant interactions are believed to influence profoundly the security of the infant's attachment to the mother (Ainsworth et al. 1978).

These studies have therefore, endeavored to show that depression has become both a social and a health problem for women and their families particularly in relation to their infants. Evidence suggests that observations of early mother-infant interactions are essential in providing information to caregivers as well as to the society at large about the infants' behavioural, emotional and communicative capabilities; and how these are affected by maternal postnatal depression. Consequently, it is therefore important to bear in mind that caregiving in the earliest months has a significant impact on the early development of the infant. As such, many from the helping disciplines in particular, employ caregivers to be extra careful when carrying out their responsibilities of caring and nurturing the very young individuals. As many researchers point out that caregiving in the early months of life depends primarily on the principal caregiver, hence it is important to acknowledge and keep check on the maternal emotional state. This is so because, according to most researchers, caregiving is driven by an individual's emotional state expressed in his/her responsiveness to the infant's signals. Also, the social and cultural beliefs and attitudes of the caregiver has a profound influence on the early development of the infant; and these, of course, come into play during the interaction.

Understanding this has encouraged more attempts to find out how women in the developing countries respond to their infants. It is a known fact that certain conditions affecting the infant or the mother such as malnutrition, lack of confidence, low morale or

preoccupation with self of some mothers hard pressed by their economic and social circumstances can severely disrupt the interaction process (Lavelli et al.1998; Richter 1995). According to Richter (1995), researchers often assume that South African mothers in deprived circumstances will exhibit disturbed interactions with their infants. However, Richter discovered that South African mothers were found to be vocally expressive and actively engaged to their infants' communicative behaviours. As far as Richter (1995) argues " there was almost complete correspondence between African and Western dyads" (p.4). There is therefore some debate about the impact of deprivation in South Africa on mother-infant interaction. This study therefore provides an opportunity to observe mother-infant face-to-face interactions in Khayelitsha in comparison with the British sample in the hope of discovering certain similarities and differences within the interactions.

CHAPTER 3: METHOD

3.1. Population and sampling

3.1.1 Khayelitsha sample

South Africa has been undergoing a process of urbanisation since the abolition of the “pass laws” in 1986 (Cooper et al. in press). According to Cooper et al. (in press), this resulted in a sharp increase in the number of people migrating from Transkei and Ciskei – former homelands in the Eastern Cape, to the urbanized areas. On arrival these people lived in poor and overcrowded conditions on the periphery of the newly established urban sites. A consecutive sample of mothers and their infants for the study were drawn from one such area, Khayelitsha, a rapidly expanding informal settlement of about 350 000 people (Berg et al. 1997). Khayelitsha is situated approximately 32km from the centre of Cape Town, and is divided into many different sites such as Site A, B, C, SST, Town II, Maccassar and Makhaya. The study was carried out in two adjoining areas of Khayelitsha that is, SST and Town II. SST is an informal settlement characterised mainly by high levels of unemployment and poverty. Dwellings are predominantly unserviced shacks with no electricity, toilets or running water. Serviced houses of bricks, on the other hand, characterize Town II, with electricity, outdoor toilets, running water taps and water borne sewage system.

The sample was recruited using a number of strategies. The main method was by visiting the Maternity Obstetric Units (MOU's) of the local hospital, which serviced both areas. Lists of mothers who had given birth were obtained on a weekly basis. Over the course of the nine months of the study a consecutive series of 170 women were approached for recruitment at their homes or from the appointment diary of these local clinics and hospitals. However, to ensure that no women had been missed, two part-time recruiters were employed to go door-to-door inquiring about the presence of infants in the neighbourhood. These recruiters were known in the area and mothers readily volunteered for participation in the study. The good relationship between the research team and the participants was maintained by giving the mothers and their infant's food parcels, a baby romper suit and photographs were taken during their visit.

Of these 170 women, 23 could not be traced, either because they had moved out of Khayelitsha and had given no forwarding address, or because they had left Khayelitsha altogether returning to the Eastern Cape. The remaining 147 women constituted, as far as it could be determined, the full sample of residents within SST and Town II who had delivered their babies within the period under consideration. The majority of the mothers recruited were between 16-40 yrs of age. 63% of these women were single, mostly Xhosa speaking, illiterate or with low level of education (more than half the sample - 53% - had received no education beyond standard 7 and unemployed.

46.3% of the sample lived in unserviced shacks, 48.3% in semi-serviced, and 5.4% in serviced houses with their extended families, which often excluded the fathers of their

children. 60% of the sample had been pregnant before, 30% were primiparous, and 10% had four or more children. 89.4% had a normal vaginal delivery, with 10.6% delivered by caesarian section. Their infants were of 37- 42 weeks gestation and had a birth weight of at least 2.5kg. However 9.9% of the infants weighed less than 2500g at birth. The sex of the infant was not considered as a selection criterion (Cooper et al. in press).

Due to the sensitive nature of the study and its potential to impinge on the privacy of the participants, negotiations for entry in the target area were undertaken by one of the research team members prior to the initiation of the study. This proved to be a long process, requiring constant discussions with the Residence committees³. First and foremost, the residents were sceptical of the study; because it was hosted by UCT – which meant, in their minds, that this was another bureaucratic stance to use them (residents) as guinea pigs, then leave without providing any compensations or tokens as a show of appreciation and gratitude for participating. Thus, a Xhosa-speaking person, Ms Nosisana Nama, was requested to represent the research team and state the purpose of the study as well as point out the gain of allowing such study to take place. A complete research proposal including a guarantee of confidentiality was provided to all areas of interest, for example, to residence committees, clinics and hospitals serving the area of concern. Ultimately, the request was accepted provided that members of the community would receive first preference for jobs generated by the study such as recruitment or housekeeping – this meant that no outsiders were to take any posts without considering

³ These are committees voted by the community members to maintain smooth running of the community; they are trusted to look after the welfare of the people.

the members of the area of study first. The study was financed and conducted with the support of the Wellcome Trust.

All three assessors, that is, the two who screened the subjects using the Edinburgh Postnatal Depression Scale (EPDS) and the Structured Clinical Interview for DSM-IV diagnoses (SCID) as well as the one who used the Global Rating Scales (instruments will be discussed later), were Xhosa-speaking. They had an intimate connection with the subjects under study. They understood the socio-cultural, economic and political factors the subjects have been exposed to and therefore seemed to have much more insight and accessibility to the inner world of the subjects than any of the other research team members. There was always a sense of belonging and identifying with the subjects which seemed to contribute tremendously during the assessments.

3.1.2. British sample

Prof. P.J Cooper of the Winnicott Research Unit provided the comparison sample for this study from the University of Reading, England. This sample was derived from a community sample of primiparous women who had delivered between February 1986 and February 1988 at the maternity hospital in Cambridge, England. All these mothers were either married or cohabiting. 49% had been in full-time education for at least 12 yrs. Their infants were of 37- 42 weeks gestation, had a birthweight of at least 2.5kg and had no gross congenital abnormality or had not required admission to the special care baby unit.

The recruited women were assessed for depression at 6 weeks postpartum. First, the Edinburgh Postnatal Depression Scale (EPDS) was administered by post and the return rate was 97%. This was followed by the administration of the Standardized Psychiatric Interview (SPI), modified to identify depressive episodes fulfilling Research Diagnostic Criteria to all probable cases. After each and every woman who had experienced an episode of depression since delivery was identified, potential psychiatrically well controls were selected randomly from those with a score on the EPDS below the cutoff, that is, those who had no indication of a previous history of depression. These women were also interviewed using the SPI to ensure that no depression had occurred either prior to or since delivery. Forty-two were therefore selected as controls. Together with the depressed they were invited to participate in the study. All but three from the depressed group were finally recruited. In two cases, career moves prevented further involvement and one woman was discouraged from participating by her physician. A random subsample of the total population ($n = 49$) was seen for assessment of mother-infant interactions. They comprised of 20 mothers from the control group and 29 mothers from case group (Murray et al. 1996).

3.2. Procedure

The mothers in Khayelitsha who agreed to participate were assessed for depression using a two-stage procedure. First the Edinburgh Postnatal Depression Scale (EPDS) was administered to determine the depressed group from non-depressed group. The major

depression section of the Structured Clinical Interview for DSMIV diagnoses (SCID) then followed it in order to identify women who had experienced an episode of depression since delivery. Prof. P.J. Cooper (University of Reading) and Prof. L. Swartz (University of Cape Town) provided training in this interview. All assessments were conducted in the Thulasana Research Unit; a research base set up in the backyard of Zibonele Community Centre within Khayelitsha. Individual appointments were arranged with those mothers who had agreed to participate. These mothers were either fetched, brought in or came on their own. The women were assessed by one of the two interviewers. The interview included details on current social circumstances, migration history, education and employment history, previous obstetric and medical history, availability emotional and practical support from friend and family, and child care issues.

These interviews were audio recorded so as to avoid disrupting the interaction between the interviewer and interviewee. Following each assessment the content of each interview was reviewed in detail with the interviewer by the co-ordinator. A collective decision about each of the relevant SCID symptoms was made, on the basis of which a DSMIV major depression was coded as present or absent.

When the mothers felt that their infants were awake, alert and contented the infant was placed in reclining seat. The mother sat opposite the infant and was asked to play or chat with the infant for about 5 minutes without using a toy. The face-to-face mother-infant interactions were video taped by one of the assessors. The video camera was positioned such that a full-face view of the infant and the mother's profile were obtained. This

ensured that the occurrence of eye-to-eye contact was captured and scored. In addition to this, a mirror was placed adjacent to the infant's seat to capture the mother's full face image alongside that of the infant in the same camera frame. If the infant became inconsolably distressed, fell asleep and or the mother's position obscured the image of the infant filming would be stopped or interrupted.

3.3. The instruments

3.3.1. Global Rating Scales

The video-taped sessions were scored using the Global Rating Scales developed by Fiori-Cowley and Murray in 1994. The trained researcher scoring the interactions was blind to the mothers' psychiatric status. The scoring scheme consisted of two kinds of ratings, namely, time sampling and event sampling ratings. **TIME SAMPLING RATINGS** rated particular maternal and infant behaviors occurring in the 5 minutes of play. These are rated on a series of 5 point scales, which identified the behaviour or the interaction as either good, or poor. **EVENT SAMPLING RATING** assessed predefined behaviours as either present or absent on a 1- sec time base. This highlighted the responsiveness of one partner to the other and allowed the researcher to examine the way in which certain maternal and infant behaviours were organized in relation to each other.

The following scales (as summarized from the manual) were used in respect of each partner and their interaction:

Maternal Scales/Ratings can be split into (a) sensitive to insensitivity (good or poor): rates the extent to which the mother responded to the infant's cues, in a way appropriately adjusted to the infant's behaviour. It also measures maternal warmth and acceptance; (b) intrusive to remote: reflects the distinction made in literature between depressed or insensitive mothers who are overbearing and over-stimulating and those who withdraw into themselves and find it hard to interact with their infants. Intrusive behaviour and speech are not simply measures of how often the mother touches the infant or of how much she talks. Rather, they are related to the infant's experience of the mother's behaviour. So behaviour and speech are rated highly intrusive when they disrupt or cut across the infant's behaviour in some way, from interrupting or overriding the infant's vocalizations to causing distress or increased avoidance. Remote behaviour refers to the degree of the mother's withdrawal from the infant psychologically or physically. This dimension defines the mother's behavior as that of an "observer" whereby the mother is detached from the infant; sits back and watches the infant and appears lost in her own thoughts despite the infant's efforts to engage or seek her attention; and (c) depressive symptoms (affirmations and negations): capture the outward impression of the mother's affective state and energy level. This dimension rates the amount of smiling, laughing and positive affect the mother displays, as well as how involved the mother is in the interaction, how much support she gives to the infant when, for example, (s) he slips. This

also rates the degree of “self consciousness” or “ situation-consciousness” the mother displays.

Infant Ratings/ Scales comprise of two dimensions: (a) good to poor, which provides a summary of the infants behaviour on a scale running from infants who are attentively engaged with their mothers and are communicative and vocal, to those who engage in little or no visual contact and are uncommunicative; and (b) withdrawn/ inert to fretful which captures the nature of the infant’s attention system and level of physical activity. This is not dependent on the nature of the activity –an infant can score a 5 or 4 if (s)he is happy or distressed as long as (s) he is physically active. Fretful behaviour is when the infant’s distress seem to have an angry or cross/ protesting feel to it. This must be more than a slight frown but be more like an angry cry or shout.

Interaction Scales rate the nature of the engagement as good or poor between the mother and the infant over the 5 minutes period.

To ensure adequate reliability a few randomly selected video tapes of the mother–infant face-to–face interaction sessions were scored independently by members of the Winnicott Research Unit who were also blind to the sample and its psychiatric history. Periodic checks in reliability were made and found satisfactory before the Khayelitsha interaction ratings could proceed.

3.3.2. EPDS

This is a 10-item self-report scale which was derived from Snaith's earlier work. It was developed for the purpose of screening postnatal depression in women who had given birth. The scale can be completed in about 5 minutes and has a simple method of scoring.

Though the EPDS is not a substitute for a clinical assessment of depression, it has been found to be very a reliable and valid instrument in detecting depressed women postpartum (Cox et al. 1987).

3.3.3. SCID (from the manual by First et al. 1996)

The Structured Clinical Interview for DSM-IV Axis 1 Disorders is a semi-structured interview for making the major DSM-IV Axis 1 diagnoses. A clinician or a trained mental health professional who is familiar with the DSM-IV classification and diagnostic criteria can administer it. The subjects may either be psychiatric or general medical patients, or individuals who do not identify themselves as patient, such as subjects in the community survey of mental illness or family members of psychiatric patients. The language and diagnostic coverage make the SCID most appropriate for use with adults (age 18 and over). The language is also suitable for anyone with an 8th grade education. Precaution should be taken to ensure that the SCID is not used to some subjects with severe cognitive

impairment, agitation, or severe psychotic symptoms. This can be detected in the first ten minutes of the interview, in the Overview section. The SCID is used to select a study population and ensure that the subjects have symptoms that meet the DSM-IV criteria for major disorder under study. It can also be used to exclude subjects with certain disorders that are not under study as well as to characterize the study population in terms of the current and past psychiatric diagnosis.

The SCID Axis 1 can be administered in a single sitting of about 60-90 minutes depending on the complexity of the psychiatric history and the ability of the subject to describe his/her illness. A simple Yes or No can answer the majority of the questions. However, it is necessary to ask the subject to elaborate on his/her description of the illness so that the interviewer can use his/her clinical judgement to determine whether a criterion for the DSM-IV diagnoses is met.

3.4. TRAINING AND CODING

Agnese Fiori-Cowley and members of the Winnicott Research Unit ran training in the use of the Global Rating Scales. The course ran for 2 weeks. It had an introduction from Prof. Lynne Murray and an overview of the statistical properties from Matt Woolgar. The process of rating was described and each dimension explained scale by scale. Video taped sessions of the face-to-face mother-infant interactions were shown repeatedly with Fiori-Cowley pointing out all the significant maternal and infant behaviours. This gave an idea

of what to look for when coding. Time to practice coding and scoring was given using demo interactions selected by F-C. This helped to check progress and understanding of the process. By the second week reliability check-ups were done.

3.4.1. PERSONAL COMMENTS ON THE TRAINING COURSE

Very little time was given to the training course. A great deal of information was taught within this very short space of time. We all felt overloaded. Once training was over we were expected to go back home and find subjects willing to be used for practice. This involved a long process of negotiations and there were certain ethical issues to consider. Consequently, a long period elapsed without any practice except for a reliability tape, which was provided at the end of the course. This consisted of examples of the demonstration interactions to be rated in order to determine reliability. Due to lack of practice ratings for the reliability tape were a few points out. Further training was arranged and the interactions were discussed again with more clarity. This time the ratings became more consistent and reliable.

To code the mother-infant interactions, the maternal and infant behaviours were rated on a series of 5 point scales, which identified the interactions as either good, or poor. A sum score is obtained for the major groupings to enhance assessment and analysis of the interactions. Coding is hard work. It takes the researcher an hour or so to scrutinize and analyse a 5 minutes session. It is very important to listen very carefully to what is said and

pay attention to every detail of the interaction. This helps eliminate any unnecessary mistakes and to ensure that scoring is accurate. This is sometimes difficult because it's not easy to keep an open mind and stay objective all the time. To prevent this, one has to constantly check and this can be time consuming but necessary.

CHAPTER 4: RESULTS

At the inception of this study, it was hypothesised that there would be significant differences between the Khayelitsha and the British population. The researcher was working on the supposition that there were significant differences between the populations' demographic characteristics and the influence of these on depression and mother-infant interactions. First of all, the results of the Cambridge study will be briefly outlined, then the findings of the current study will be described and afterwards, comparisons between the two sample populations will be provided.

4.1 Cambridge Results (as summarised from an article by Murray et al. 1996)

Analyses of the mother-infant face-to-face interactions were made using Student t-tests (see Table 1). Compared to the interactions of non-depressed mothers, those of the depressed mothers were rated overall as less sensitive. Depressed mothers expressed fewer affirmations and more negations of their infants' behaviour. Murray et al. discovered that these two groups of women did not differ in the degree to which they were intrusive toward their infants, or else remote or withdrawn from them.

Murray and colleagues found a significant correlation between the quality of the infant communication and that of the mother. In other words, the more sensitive the mother was with the infant, the more actively engaged the infant was with her ($r = .49, p < .0005$). Despite the differences in communication between the two groups of mothers, the infants

“showed broadly similar profiles” (p.2517). According to Murray et al. (1996) infants of the depressed and non-depressed mothers did not differ in the degree to which they were actively engaged with their mothers, or in the extent of either being flat and inert or else distressed and fretful. However, there were significant differences noted in the rate of disruptions in infant behaviour. Murray et al. (1996) discovered that regardless of maternal depression, negative comments or behaviour from the mother preceded infant disruptions of communication with the mother. This was in turn preceded by expressions of negative affect in the infant.

The presence of adversity was considered in relation to maternal and infant behaviour. Differences between the depressed and non-depressed mothers were evident with regard to maternal sensitivity and negative comments or behaviour as well as infant disruptions. 86% of the depressed group of women was found to have experienced some form of stress at some point in their lives or difficulty during pregnancy, compared to the 40% of the non-depressed group. According to Murray et al. (1996), non-depressed women who were free of adversity were rated as significantly more sensitive than both non-depressed women experiencing adversity and women in the depressed group. However, non-depressed women experiencing adversity were rated as more sensitive than depressed women without adversity.

Table 1: British mother-infant interactions for the Depressed and Non-depressed groups (from Murray et al. 1996).

	Depressed			Non-depressed				
Variables	Mean	SD	N	Mean	SD	N	T-Value	P-Value
Maternal								
Sensitivity	3.5700	0.7981	20	2.6069	0.5669	29	4.945231	<0.01
Intrusiveness	3.97500	0.8503	20	3.6897	1.0037	29	1.039029	>0.05
Remoteness	4.3750	0.6463	20	3.9655	0.9056	29	1.737573	>0.05
Happiness	4.1500	0.4894	20	3.4741	0.5604	29	4.364183	<0.01
Infant								
Positive Engagement	2.9500	1.2391	20	2.6667	0.9129	29	0.9221548	>0.05
Attentiveness	3.5500	0.8466	20	3.4253	0.5835	29	0.6112876	>0.05
Happiness	4.0000	0.8885	20	3.8103	0.9943	29	0.684881	>0.05
Interaction								
Quality	3.0000	1.1698	20	2.3931	0.9388	29	2.010818	>0.05

4.2. Khayelitsha Results

The point prevalence of DSMIV major depression was found to be 34.7%. In 26 women, that is, roughly half of the depressed group, the onset of depression had been since the delivery. On the other hand, in 25 women the onset had been at some point antenatally.

Student t-tests were used to compare ratings of the interactions of the depressed mothers and their infants with those of the non-depressed mothers and their infants (see Table 2). Missing data has made the numbers slightly less than 147. The t-test results indicated that the depressed mothers were rated as significantly less sensitive as compared to the non-depressed mothers ($t(140) = 2.074$; $p < 0.05$). The depressed mothers were not significantly more or less intrusive and remote compared to the non-depressed mothers. However, there was a significant difference between their level of happiness and involvement within the interaction ($t(140) = 2.769$, $p < 0.01$).

Compared to the infants of non-depressed mothers, the infants of depressed mothers were significantly less positively engaged in their interactions ($t(140) = 2.037$; $p < 0.05$). In other words, infants of non-depressed mothers appeared to be more actively engaged and attentive to their mothers than those of the depressed group ($t(140) = 1.746$, $p > 0.05$). However, there was no significant difference in the extent to which the infants were flat and inert or else fretful and distressed ($t(140) = 1.409$; $p > 0.05$).

The question of the extent to which the adverse interactions are driven by maternal depression or social adversity remains utmost. In order to understand more clearly the nature of these mother-infant face-to-face interactions, an examination was made of whether the quality of the interactions was related to certain factors other than maternal depression. Cooper, et al (in press) reported that there were no significant associations found between any of the maternal or infant subscales; or the ratings of the overall quality of the interaction, and maternal demographic characteristics and educational level, as well as indices of socio-economic adversity. There was no difference therefore between the Town II and the SST groups. As far as they could tell, maternal depression was associated with insensitive engagement with the infants as well as with poor emotional and practical support from the partner. In other words, the presence of a partner and the level of practical support from the partner added significantly to maternal levels of sensitivity and were associated with lower rates of depression. Furthermore, according to these authors, depression was strongly related to whether the pregnancy was planned or not rather than the method of delivery. Consequently, an unwanted pregnancy held a notable association with depression occurring either antenatally or postnatally.

Table 2: Khayelitsha mother-infant interactions of the depressed and non-depressed groups

Variables	Non-depressed			Depressed			T-Value	P-Value
	Mean	SD	N	Mean	SD	N		
Maternal								
Sensitivity	2.8280	0.4788	93	2.6490	0.5075	49	2.074393	<0.05
Intrusiveness	3.5430	0.5247	93	3.6735	0.6419	49	-1.302422	>0.05
Remoteness	3.9677	0.7140	93	3.7857	0.7289	49	1.433676	>0.05
Happiness	3.2043	0.4468	93	2.9643	0.5660	49	2.769353	<0.01
Infant								
Positive Engagement	2.4158	0.7687	93	2.1429	0.7391	49	2.037697	<0.05
Attentiveness	2.8566	0.8097	93	2.5986	0.8871	49	1.746092	>0.05
Happiness	3.4731	1.1548	93	3.1837	1.1801	49	1.409009	>0.05
Interaction								
Quality	2.2000	0.8915	93	1.9306	0.8501	49	1.739134	>0.05

4.3. Comparisons between the Khayelitsha and the British sample.

A comparative analysis of the results obtained by relating the data sets of Khayelitsha and Cambridge mothers and their infants yielded interesting results. Depressed mothers from both case study groups showed no significant differences in their interaction style and maternal sensitivity ($t(76) = 0.339$; $p > 0.05$) (see Table 3). However, the non-depressed group of women in Cambridge appeared to be significantly more remote toward their infants compared to their counterparts in Khayelitsha ($t(111) = -2.351$; $p < 0.05$) (see Table 4). This contrasts sharply with the high levels of happiness in Cambridge ($t(111) = -8.444$; $p < 0.01$) (see Table 4). An interesting discovery was that the overall mother-infant interactions in the absence of maternal depression in Khayelitsha was rated significantly poorer than the interactions in the non-depressed group in Cambridge ($t(111) = -3.435$; $p < 0.01$) (see Table 4). These differences in the interaction style between these two study populations may be a function of the difference in the overall level of socio-economic adversity as well as cultural. When the Khayelitsha non-depressed group was compared with the Cambridge non-depressed group that had experienced some adversity, there was no significant difference noted in any of the interaction subscales ($t(99) = 1.21, 0.78$) (Cooper et al. in press).

Infants of the Cambridge depressed group of mothers were significantly more actively engaged in the interaction with their mothers than those from the Khayelitsha group of depressed mothers ($t(76) = -2.768$; $p < 0.01$) (see Table 3). Compared to the infants of depressed mothers in Cambridge, the infants of the depressed women in Khayelitsha were

significantly less attentive to their mothers and their environment ($t(76) = -4.472; p < 0.01$) (see Table 3).

Table 3: Comparison between Khayelitsha and British mother-infant interactions of the depressed groups.

	Khayelitsha			British				
Variables	Mean	SD	N	Mean	SD	N	T-Value	P-Value
Maternal								
Sensitivity	2.6490	0.5075	49	2.6069	0.5669	29	0.3389418	>0.05
Intrusiveness	3.6735	0.6419	49	3.6897	1.0037	29	-0.08702	>0.05
Remoteness	3.7857	0.7289	49	3.9655	0.9056	29	0.9610166	>0.05
Happiness	2.9643	0.5660	49	3.4741	0.5604	29	-3.858463	<0.01
Infant								
Positive Engagement	2.1429	0.7391	49	2.6667	0.9129	29	-2.768695	<0.01
Attentiveness	2.5986	0.8871	49	3.4253	0.5835	29	-4.472428	<0.01
Happiness	3.1837	1.1801	49	3.8103	0.9948	29	-2.397741	<0.05
Interaction								
Quality	1.9306	0.8501	49	2.3931	0.9388	29	-2.233572	<0.05

Table 4: Comparison between Khayelitsha and British mother-infant interactions of non-depressed groups

Khayelitsha

British

Variables	Mean	SD	N	Mean	SD	N	T -value	P-value
------------------	-------------	-----------	----------	-------------	-----------	----------	-----------------	----------------

Maternal

Sensitivity	2.8280	0.4788	93	3.5700	0.7981	20	-5.505004	<0.01
Intrusiveness	3.5430	0.5247	93	3.9750	0.8503	20	-2.954367	<0.05
Remoteness	3.9677	0.7140	93	4.3750	0.6463	20	-2.351007	<0.05
Happiness	3.2043	0.4468	93	4.1500	0.4894	20	-8.444151	<0.01

Infant

Positive Engagement	2.4158	0.7687	93	2.9500	1.2391	20	-2.498325	<0.05
Attentiveness	2.8566	0.8097	93	3.5500	0.8466	20	-3.446984	<0.01
Happiness	3.4731	1.1548	93	4.0000	0.8885	20	-1.919378	>0.05

Interaction

Quality	2.2000	0.8915	93	3.0000	1.1698	20	-3.434707	<0.01
----------------	--------	--------	----	--------	--------	----	-----------	-------

CHAPTER 5: DISCUSSION

The current study was aimed at assessing the quality of the early mother-infant face-to-face interactions and to draw comparisons between the two-sample populations, that is, Khayelitsha and British depressed and non-depressed groups of women.

From the t-test results it was apparent that depressed mothers of the Khayelitsha population were rated significantly less sensitive compared to the non-depressed group of the same population. These two groups did not, however, differ significantly in the degree to which they were intrusive toward their infants. On the other hand, the infants of the depressed mothers were significantly less positively engaged in their interactions compared to those of the non-depressed mothers. However, there were no significant differences in the extent to which they were flat, inert and or fretful and distressed. From this account it may be possible to hypothesize that the more sensitive the mother is, the more actively and positively engaged the infant becomes, though the influence may occur in either direction.

When comparisons between the Khayelitsha and the Cambridge sample were made, a surprising finding was that the non-depressed mothers in the Cambridge population sample were found to be significantly more remote toward their infants compared to their counterparts in Khayelitsha. This could be due to the fact that the British may culturally favour a distant and introverted style, and may be very conscious of an individual's personal space and boundaries. Women from Khayelitsha, on the other hand, are most likely to be expected to behave in a more intrusive way because they tend to touch, poke

and pull their infants much more frequently and repetitively. They supposedly believe that close contact is an indication that one cares and is affectionate. This may, therefore, explain the differences. Also, an interesting discovery was that the interactions of the non-depressed women in Khayelitsha were rated significantly poorer than those from within the non-depressed group in Cambridge. These differences appeared to be a function of the difference between these groups in the overall level of socio-cultural and economic adversity. The Khayelitsha group of women has been exposed to extremely high levels of socio-political, cultural, economic and personal adversities than those they are directly compared with. Also, the differences could be explained in relation to the use of the Global Rating Scales. The scales were developed in Britain therefore may be culturally biased because they are closely connected to the British cultural context than to the Khayelitsha sample. For this reason, it may be inappropriate to apply them to the Khayelitsha population.

According to Cooper et al. (in press) depression within the Khayelitsha sample was significantly related to a preoccupation with whether or not the pregnancy was planned.

Cooper et al. (in press), discovered that a planned pregnancy was associated with better availability of the emotional and practical support from the spouse. Many researchers have reported that depression during the early mother-infant interactions is a function of maternal age, ethnicity, cultural background, educational and socio-economic status (Fracasso et al, 1997). However, with the Khayelitsha sample, Cooper et al (in press), found that the occurrence of depression postpartum or antenatally was not associated with maternal age, parity, infant gender, educational history and marital or socio-economic

status. However, there is reason to believe that the extent of maternal depression found in the Khayelitsha women will have adverse effects on the cognitive and emotional development of the infants at a later stage of development if predictions from international research hold in this context. The Khayelitsha depressed mothers were found to be significantly less sensitive to their infants than the non-depressed mothers; and the infants of depressed women, on the other hand, were significantly less actively or positively engaged with their mothers. This, therefore, may predispose them to poor cognitive and emotional performance later in life. This notion is strongly supported by Murray and Cooper (1997), who state that impaired patterns of early communication between the mother and the infant have a profound impact on the infant's early development.

As it is, the findings of this study are a major concern for the future of the mothers as well as their infants. The rate of depression in Khayelitsha has been found to be very high and has a significant impact on maternal sensitivity as well as the quality of infant interpersonal engagement. It appears, therefore, that the children of mothers in Khayelitsha may be at a greater risk for adverse cognitive and socio-emotional outcomes in later stages of development. It is of utmost importance that programmes of intervention be designed to improve postpartum depression and maternal sensitivity.

CHAPTER 6: LIMITATIONS AND RECOMMENDATIONS

In studies of this kind, there is always a need to detect interview and culture bias, and to bear in mind that it is not always easy or possible to preserve blindness completely.

However, in order to counter for any bias that may arise as a result of the assessors being Xhosa-speaking; constant monitoring and periodic checks in reliability were done by the members of the Winnicott Research Unit.

As a Xhosa-speaking research team member, it was easier to pick up and take note of certain styles of behaviour and communications which had an impact on the way the subjects presented themselves. Most of the mothers behaved in a manner that clearly indicated that they were merely performing to please the assessors. From their responses it became clear that they were giving what they thought was expected of /from them. For example, during the video taping sessions most of the mothers seemed to regard the situation as that in which they were being judged. This may have influenced their behaviour. It was not noted, however, that this behaviour differentially affected either the depressed or non-depressed groups. In future studies, it would be interesting to investigate the power held by the participants (in this case the mothers) and its impact on the results of the study. To ensure that attention is given to this power, it is important to explain the process to the participants timeously in a manner that will put them at ease, for example in this case, it can be stated that “we are interested in finding out how different mothers and their infants play together. The mirror is only used so that we can see what is it that the

infant is reacting to, otherwise his/her movements and smiles, etc., might seem a bit odd or random”.

One problem that became evident was the lack of proper terminology or definitions to explain the existence of depression among the assessed women. The assessors seemed to lack the appropriate discourse such that when interpreting what the subjects were saying, it is possible that some of the meaning could have been lost. Use of audio-tape recorders was a brilliant idea. Reviewing of the content of each assessment should be done by a team of individuals blind to the study but objective enough to provide a detailed and unbiased account of the interaction.

Though having Xhosa-speaking assessors was an advantage, occasional difficulties could have been experienced. Lack of proper and adequate training could have compromised the results of the study. Adequate time should be set aside for proper training and practice. It may be advantageous to use individuals who have a psychological way of thinking and an understanding of health care issues.

For future studies, it is important that initial assessments are made during pregnancy and not in the postpartum period. This would help to get a sense of what is happening in the expecting mother's life and provide a full picture of the factors affecting the mothers.

However, it is understandable in this case that the women were not followed throughout their pregnancy period because the population from which the sample is drawn is highly unstable. There has always been steady influx or sustained movement within Khayelitsha

itself from serviced to unserviced shacks; from violent to less turbulent areas and from flooded to drier areas. This would have made it difficult to keep track of all the subjects, hence the process of following the subjects from a prenatal stage was never implemented.

What became clear and stood out in this study was the love and care these mothers have for their infants despite the social and personal adversities they have experienced. The study highlighted the need to develop intervention programmes that can prevent factors that have an adverse effect on the overall development of the child. It also became evident that it is the impaired patterns of interactions occurring between the mother and the infant in the context of depression, rather than the infant's exposure to depressive symptoms per se, which is important to the child's functioning and development; and needs immediate attention.

REFERENCES

1. Ainsworth, M.D., Blehar, M.C., Waters, E. and Walls, S. (1978). Patterns of Attachment: A Psychological study of the Strange Situation. Hillsdale, NJ : Earlbaum.
2. Berg, A. Joffe, A. and Nama, N. (1997). The first two years of the University of Cape Town Parent-Infant Mental Health Service. *Southern African Journal of Child and Adolescent Mental Health*, Vol. 9 (2), 151-157.
3. Brighi, A. (1997, March). Patterns of mother-infant interaction and contingency learning in full-term infants. *Early Development and Parenting*, Vol. 6 (1), 37-45.
4. Cogill, S.R., Caplan, H. L., Alexandra, H., Robson, H. M. and Kumar, R. (1986). Impact of maternal postnatal depression on cognitive development in young children. *British Medical Journal*, Vol. 292, 1165-1167.
5. Cohn, J.F., and Tronick, E.Z. (1989). Specificity of infants' response to mothers' affective behaviour. *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol. 28, 242-248.
6. Cooper, P. J. (1998, 1999). Postnatal depression: Abstracts. *British Medical Journal*, Vol. 316, 1884- 1886.
7. Cooper, P. J., Campbell, E.A., Day, A., Kennrly, H. and Bond, A. (1988). Non-psychotic psychiatric disorder after childbirth.: A prospective study of prevalence, incidence, course and nature. *British Journal of Psychiatry*, Vol 152, 799-806.
8. Cooper, P. J., Tomlinson, M., Swartz, L., Woolgar, M., Murray, L. and Molteno, C. (in press) Postpartum depression and the mother-infant relationship in a South African peri-urban settlement. *British Journal of Psychiatry*.

9. Cox, J. L. (1983). Postnatal depression: a comparison of African and Scottish women. *Social Psychiatry*, Vol. 18, 25-28.
10. Cox, J. L., Connor, Y. and Kendell, R. E. (1982). Prospective study of the psychiatric disorders of childbirth. *British Journal of Psychiatry*, Vol. 140, 111-117.
11. Cox, J.L., Holden, J.M. and Sagovsky, R. (1987). Detection of Postnatal Depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry*, Vol. 150, 782-786.
12. Donovan, W. L., Leavitt, L. A. and Walsh, R. O. (1997, Jul-Sep). Conflict and Depression predict maternal insensitivity to infant cries. *Infant Behaviour and Development*, Vol. 21, (3), 505-517.
13. Field, T. M., Healy, B., Goldstein, S. and Guthertz, M. (1990). Behaviour state matching and synchrony in mother-infant interactions in non-depressed vs depressed dyads. *Developmental Psychology*, Vol 26, 7-14.
14. Field, T. M., Healy, B., Goldstein, S., Perry, S., Bendell, D., Schanberg, S., Zimmerman, E. A. and Kuhn, C. (1988). Infants of depressed mothers show "depressed" behaviour even with non-depressed adults. *Child Development*, Vol. 59, 1569-1597.
15. Fiori-Cowley, A. and Murray, L. (1996). Global Ratings for mother-infant interactions at two and four months: A training manual. Winnicott Research Unit, University of Reading, Department of Psychology, 3 Earley Gate, Reading. RG6 6AL.
16. First, M.B., Gibbon, M., Spitzer, R.L. and Williams, J.B.W. (1996) Structured Clinical Interview for DSM-IV Axis I disorders (Research version). New York. Published by Biometrics Research.

17. Fracasso, M. P., Lamb, M. E., Schoelmerich, A. and Leyendecker, B.(1997). The ecology of the mother-infant interaction in Euro-American and immigrant Central American families living in the United States. *International Journal of Behavioural Development*, Vol. 20 (2), 207-217.
18. Lavelli, M.and Poli, M. (1998). Early mother-infant interaction during breast- and bottle- feeding. *Infant Behaviour and Development*, Vol. 21 (4), 667-683.
19. Lemaitre-Sillere, V. and Bennet, P. (trans), (1998, Oct). The infant with a depressed mother: Destruction and Creation. *Journal of Analytic Psychology*, Vol 43 (4), 509-521.
20. Meins, E. (1997,June). Security of attachment and maternal tutoring strategies: Interaction within the zone of proximal development. *British Journal of Developmental Psychology*, Vol 15 (2), 129-144.
21. Murray, L. (1992). The impact of postnatal depression on infant development. *Journal of Child Psychology and Psychiatry*, Vol 33, 543-561.
22. Murray, L. and Cooper, P.J. (1997, March). Postpartum depression and child development. *Psychological Medicine*, Vol 27 (2), 253-260.
23. Murray, L.; Fiori-Cowley, A.; Hooper, R. and Cooper, P.J. (1996). The impact of postnatal depression and associated adversity on early mother-infant interactions and later infant outcome. *Child Development*, 67, 2512-2526.
24. Murray, L.; Kempton, C.; Woolgar, M. and Hooper, R. (1993). Depressed mothers' speech to their infants and its relation to infant gender and cognitive development. *Journal of Child Psychology and Psychiatry*, 34, 1083-1101.

25. Reber, A.S. (1985). *The Penguin Dictionary of Psychology*. Penguin books Ltd. England.
26. Richter, L.M. (1995). Are early adult-infant interactions universal? A South African view. *South African Journal of Child and Adolescent Psychiatry*, 7, 2-18.
27. Rutterberg, W.B.; Finello, K.M. and Cordeiro, A.K. (1997, Win). Interactions between depressed and non-depressed Latina mothers and their premature infants. *Infant Mental Health Journal*, Vol 18 (4), 364-377.
28. Schaffer, H.R. (1977). *Studies of mother-infant interaction*. Academic Press Inc. London, Ltd.
29. Shaw, D.S. and Vondra, J.I. (1993). Chronic family adversity and infant attachment security. *Journal of Child Psychology and Psychiatry*, Vol.34, 1205-1215.
30. Stein, A.; Gath, D.H.; Bucher, J.; Bond, A.; Day, A. and Cooper, P.J. (1991). The relationship between postnatal depression and mother-infant interaction. *British Journal of Psychiatry*, Vol.158, 46-52.
31. Stern, D.N. (1995) *The Motherhood Constellation. A Unified View of Parent-Infant Psychotherapy*. Published by BasicBooks, A Division of Harper Collins Publishers, Inc. New York.
32. Wrate, R.; Rooney, A.; Thomas, P. and Cox, J. (1985). Postnatal depression and child development: a three-year follow-up study. *British Journal of Psychiatry*, Vol.146, 622-627.