

Things fall apart, the centre cannot hold: An exploration of depression in infancy

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Attestation of Authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except when explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

Signed: _____ Date: _____

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Abstract

This dissertation explores the impact of the mother-infant relationship on the development of depression in infancy. The challenges of defining and identifying depression in this age group, covering 0–3 years have been addressed. One of the fundamental reasons being the inability of infants to express affect verbally. The method used is a modified systematic literature review as various studies have been summarized but not statistically compiled or quantified, unlike a traditional systematic literature review. A range of object relations theory including that of Klein, Bion, Winnicott, Balint, Mahler, Stern as well as infant development research and neuroscience form the framework through which the infant has been kept in mind while reviewing the available research on how the mother-infant relationship can contribute to the development of depression in this crucial stage of development. Data on the impact of maternal depression on infant development and progression of depression has been investigated while simultaneously addressing the circular impact of the infant's temperament on mother-infant interactions. The striking similarities between non-organic failure to thrive in infancy and depression in this age group have been highlighted. Links between attachment and depressive phenomena with an emphasis on avoidant attachment have also been drawn. An in depth discussion using theory and research data has facilitated a deeper understanding of depression in infancy. A synthesis of which reveals that maternal depression and the underlying negative mother-infant interactions, have damaging consequences on the vulnerable infant which may lead to depression in this age group. The need for early intervention through mother-infant psychotherapy has been addressed as if left undetected; depression in infancy can have long lasting consequences at various subsequent stages of development.

“Things fall apart; the centre cannot hold”

(Yeats, cited in Thomson Salo, 2001a, p.1)

Chapter 1 – Introduction

Infancy as a stage of development has always had a fascination for me, as all communication especially in the first year of life is non verbal. Interestingly the word infancy is derived from the Latin word *in-fans* meaning ‘incapable of speech’ (Paul, 2004). I believe that speech and language can constrict emotions and experience. In a world that privileges verbalization, especially of emotions there has been limited recognition that preverbal children have an emotional repertoire as well as an explicit understanding of other’s emotional expressions (Vallotton, 2008). The burgeoning arena of infant mental health (well established in United States and Europe while still in its infancy in New Zealand) however, is changing this.

But how do we know what newborns and infants experience? The 21st century has brought with it sophisticated methods and measures to delve into this area. Laboratory methods have been used to study infant development, which include measuring infants’ visual preference, facial expressions, head turning, non-nutritive sucking, heart rate and cortisol levels (Field, 2007). However, even without these highly developed techniques, natural observations of infants show us how infants constantly express themselves through crying, vocalizations, facial expressions, gestures and body movements that indicate their distress or comfort. Research has also shown that there is remarkable continuity in aspects of prenatal and postnatal life (Piontelli, 1992). For example newborns have been found to discriminate their mother’s voice from that of a stranger (DeCasper & Fifer, 1980). Furthermore, maternal stress during pregnancy has been found to increase the heart rate of the foetus (Monk et al., 2000). However, human infants are noticeably immature in their brain development, as compared to other mammals and require several years to develop (Tronick & Adamson, 1980). This development is dependent on nurturing, sensitive and empathic care on the part of the mother.

Reasons for choosing this topic

Clinical experience with older children

In my clinical practice I have worked with children between 5 – 16 years of age. Some of their presenting problems ranged from separation anxiety, hyperactivity and difficulties with peers. Their attachment styles varied from avoidant to ambivalent.

From the developmental histories shared by their parents I have often wondered whether these children were non-verbally expressing some emotional distress during their infancy which seemed to go unrecognised. For example a mother of a child I worked with shared that as an infant her child cried non-stop from the day she was born until she was about 2 months. The mother did not acknowledge any depression on her part during the child's infancy but the information she provided, seemed to indicate depression as well as unresolved loss about an earlier miscarriage and bereavement. These issues left me with questions about these children's early experiences and made me reflect on the importance of keeping the infant in my child and adolescent clients in mind.

Maternal psychological unavailability

According to research from the Minnesota Mother-Child Project,¹ parent's psychological unavailability or emotional neglect has been found to be more harmful than physical neglect or other forms of maltreatment, impacting negatively on children's attachment style (Pianta, Egeland & Erickson, 1989). In addition, avoidant attachment, which has been linked to rejection and psychological unavailability of the mother, has been found to be related to depression in childhood and adolescence (Sroufe, 2000).

These factors have ignited my curiosity as to their correlation in the genesis of depression in infancy. Keeping this in mind this dissertation seeks to explore the available data on the topic of depression in infancy while focusing on the influence of the mother-infant relationship to the development of this phenomenon.

Debate about depression in infancy

Literature shows that there is some controversy about the existence of infant depression, perhaps because of the discomfort it arouses. Rutter and Garmezzy (1983) consider the occurrence of depression prior to adolescence as comparatively rare. However, Chess, Thomas and Hassibi (1983) argue that the phenomenon is more widespread than previously acknowledged and is not uncommon. Thomson Salo (2001b) suggests that perhaps other disorders of infancy such as reactive attachment

¹ An American longitudinal study that followed children of at risk mothers (who were poor, young, had low educational backgrounds, were unstable and lacked social support).

disturbance (RAD)² may actually be manifestations of depression in infancy. Some of the debate concerning infant depression seems to be due to the difficulties that researchers and clinicians are challenged with in defining and identifying depression in an age group that has not yet developed the capacity to express affect and subjective emotional states verbally (Trad, 1986). Furthermore, infancy is a period of rapid change, more rapid than any other stage of development. Halasz (2001) explains the existence of this debate as being due to some researchers' and clinicians' inability to respect the rights of a child to be heard. Consequently they dismiss the existence of the condition and tend to miss the signs of depression which, in infants are different from the symptoms that older children, adolescents and adults present. Another fundamental issue with regard to identifying and understanding depression in infancy is the need for making distinctions between behaviours and symptoms that are normative and transient and those that have clinical significance (Luby, 2000).

Classification

Anaclitic depression

Rene Spitz is credited for one of the earliest descriptions of depression in infancy, which was termed anaclitic (leaning upon) depression (Guedeney, 2007). Spitz (1951) explained that this term was used because of the similarities³ in symptoms seen in adults with depression and symptoms in some 8 and 9 month olds who were separated from their mothers (and had no mother-substitute to lean upon) due to the latter's incarceration, and observed during the whole first year of their life. Spitz and Wolf (1946) observed that these infants developed a weepy behaviour in contrast to their previously happy demeanour. This then gave way to withdrawal where they would lie in their cots, averting their faces and refusing to interact with their surroundings. This behaviour lasted for three months after which a "frozen rigidity of expression" took its place (Spitz & Wolf, 1946, p. 313).

² Is a disturbance in social interaction. It is said to develop due to a neglect of the infant's basic emotional needs being met and has been found to be related to the infant having multiple caregivers which prevents bonding. The risk of RAD increases with isolation, poor parenting, neglect or abuse.

³ However he did emphasize that depression in infancy and adulthood were different especially because of the immature ego development in infancy.

Diagnostic Classification

In the past the approach to understanding childhood depression was to rely on adult based criteria for depression as classified in the Diagnostic and Statistical Manual of Mental Disorders (DSM III, 3rd Ed.). However, the success of this approach has been questionable as the DSM III failed to capture the unique dimensions of depression in early life (Trad, 1986). In 1994 infant depression was classified in the Diagnostic Classification Zero to Three years (DC: 03)⁴ and placed under the category of disorders of affect. Here depression in infancy is described as infants exhibiting symptoms such as “a pattern of depressed or irritable mood with diminished interest and/or pleasure in developmentally appropriate activities, diminished capacity to protest, excessive whining and a diminished repertoire of social interactions and initiative” for a period of at least 2 weeks and may be accompanied by sleep or eating disturbances including weight loss (Romer Witten, 1997, p. 81). When considering disorders of affect in infancy the Zero to three (2005) points out the importance of determining whether the symptoms are generalized across situations and relationships or specific to a particular situation or relationship. The PDM Task Force (2006) supports this view, stating that patterns of mother-infant interactions play a vital role in difficulties of mood regulation in infancy. According to the PDM Task Force (2006) depression in this age group is displayed through persistent agitation, inability in being soothed, slow movements and energy, turning away from activities that were once enjoyed accompanied by difficulties with sleeping, eating and weight regulation.

Withdrawal

Withdrawal is defined as disengagement and inactivity vis-à-vis the external environment (Engel & Schmale cited in Guedeney, 2000). Guedeney (2007) asserts that withdrawal has been found to be part of infants’ repertoire of common behavioural responses to stress and relationship disorders and is also a key feature of depression in infancy. Furthermore, withdrawal was found to be a major feature of anaclitic depression in infants observed by Spitz and Wolf (1946). However, withdrawal reaction covers a myriad of difficulties in infancy such as attachment disorders, post-traumatic stress disorder, chronic pain, hospitalization and autism spectrum disorders. Sustained withdrawal reaction (covering facial expressions, eye contact, activity level,

⁴ Revised in 2005.

vocalizations, relationship) has therefore been proposed as a useful marker for screening for depression in infancy (Guedeney, 2007). With this in mind the Alarm Distress Baby Scale (ADBS)⁵ was designed as an assessment tool for identifying depression in infancy.

Data

There is very little data on infants diagnosed with depression although anecdotal evidence states 1 in 40 infants experience ‘baby blues’ (ABC News, 2006). This lack of data can be attributed to the difficulties inherent in recognising depression in this age group and due to the similarities in symptoms with other difficulties in infancy as discussed above. Shatkin (cited in ABC News, 2006) asserts that if an infant has a depressed parent his risk of developing depression is three times that of the general population.

How does depression in infancy arise?

Thomson Salo (2001a) states that there may be various contributing factors to depression in this age group, such as distress experienced in neonatal intensive care, painful hospital procedures, or separation during infancy as well as loss of the mother psychically due to her own depression or chronic sadness due to unresolved loss. Spitz and Wolf (1946) explain the aetiology of anaclitic depression in infancy as being related to loss of the love object.

Clarification of concepts

Depression is an affective disorder⁶ and is said to originate from a complex interaction between psychological, social and biological sources (Berzoff & Hayes, 2008). Depression, which is often described as sadness, emptiness, depletion, deflation, and hopelessness can have potentially debilitating consequences when in an advanced state (Berzoff & Hayes, 2008).

⁵ Was developed by Antoine Guedeney. It helps assess infant’s social behaviour during routine physical examinations and can be administered by a range of health professionals.

⁶ Affective disorders are essentially mood disorders. Affect refers to emotional states and their outward manifestations. Mood refers to prolonged emotions that colour our psychic lives (Berzoff & Hayes, 2008).

In exploring the issue of depression in infancy this dissertation will focus on the age group of 0-3 years. This age group has been selected because greatest human growth and development takes place in the first three years of life and this is also the time when caring adults have the greatest opportunity to shape a child's future (Zero to Three, 2005).

With changing gender roles and evolving family configurations the role of primary caregiver is no longer the domain of women. Therefore the term *mother* used in this dissertation refers to the person centrally responsible for the day to day care of the infant. This can include the biological or adoptive mother, father, or grandparent. The pronoun *he* and *his* have been used to refer to the infant in order to facilitate a smooth flow in the writing, however, it includes both male and female children.

Brief outline of the chapters in this dissertation

The various factors discussed so far have inspired the following division of chapters. Following this introductory chapter, chapter two will cover methods incorporated in the collection of data for this dissertation. Chapter three will introduce psychodynamic theories related to infant development focusing on the key role that the mother plays in this development. This will lead on to chapter four where maternal depression and its contribution to depression in infancy will be addressed. Chapter five concentrates on the correlation of attachment to depressive phenomena in infancy with the emphasis on avoidant attachment. The final chapter is a consolidation of the information derived from the previous chapters along with identification of limitations, areas for future research and drawing together of conclusions.

Chapter 2 – Methods

The aim of this dissertation will be addressed in this chapter and concepts of evidence-based practice and systematic literature review will be defined. The reasons for modifying the standard systematic literature review will then be explored. Finally the processes employed in the search for literature on the topic will be identified.

Aim

The primary purpose of this dissertation has been to seek an understanding of the overall topic of depression in infancy. Since any attempt at understanding the infant whether in normalcy or psychopathology draws attention to the vital importance of the mother-infant relationship, this dissertation is guided by the research question: What is the influence of the mother-infant relationship on depression in infancy?

Evidence based practice

Evidence based practice has its roots in the medical paradigm. Over the years the principles of evidence based medicine have extended to other disciplines which, Hamer (2005) comments can serve to unify the vision of various health care practitioners. Evidence-based practice has been defined as a process of “finding, appraising and applying scientific evidence to the treatment and management of healthcare” (Hamer, 2005, p.6). Essentially it is the judicious use of the best available current evidence in combination with clinical judgement (Sackett, Rosenberg, Muir Gray, Haynes & Richardson, 1996). The main goal being to assist practitioners with their decision making process which consequently can reduce inappropriate, ineffective and potentially dangerous practices (Hamer, 2005). This highlights the need for clinicians to be vigilant, constantly updating and modifying traditional treatments.

Systematic literature reviews

Systematic reviews are literature reviews that follow a set of scientific methods with the explicit aim being to limit bias “by attempting to identify, appraise and synthesize all relevant studies in order to answer a particular question” (Petticrew & Roberts, 2006. p.9). Within the evidence-based practice framework systematic reviews generally summarise quantitative data from empirical research with the emphasis being on randomised control trails (RCTs) (Lau, Ioannidis & Schmid, 1997). Pearson (2004) argues that this emphasis on the results of experimental research tends to ignore non-

quantifiable research with its interest in subjectivity and interpretation, as legitimate evidence. By excluding evidence based on “naturalistic enquiry, case material and experiential sources” this method potentially stands to risk losing the “art and humanity” of practice (Williams & Garner, 2002, p.9, p. 10). Since human behaviour and experiences are complex and go far deeper than numerical data this dissertation is aligned with the interpretivist paradigm which postulates that all human (social) action is inherently meaningful (Schwandt, 2000). Here qualitative data tends to be used in the quest for knowledge. This approach however, does not compromise on objectivity and validity although it differs from the scientific objectivity claimed in natural sciences Crotty (1998). Since this dissertation is fundamentally interested in an in depth understanding of how the mother-infant relationship can contribute to depression in infancy, this research method is most suited to this endeavour.

Reasons for modification of this literature review

Lemmer, Grellier and Steven (1999) comment that clinical complexity calls for a need to incorporate qualitative methods into systematic reviews. Green and Britten (1998) argue that different research questions necessitate different kinds of research and ‘good’ evidence transcends the results of a quantitative review of RCTs. This is particularly relevant to the field of psychotherapy whose empirical basis lies in the clinical situation (Fonagy, 1982) and therefore uses case studies as evidence. A qualitative systematic review is one wherein various studies are summarized but not statistically compiled or quantified (Cook & Mulgrew, 1998). Thus unlike a traditional systematic reviews this systematic literature review is modified. Consequently in order to obtain a comprehensive understanding of the topic which can aid my practice as a child psychotherapist, data collected on mother-infant relationships and depression in infancy will be analysed and interpreted using a psychodynamic theoretical framework. The advantages of qualitative research lie in its exploration of depth and complexity of phenomena (Strauss & Corbin, 2008). However, its limitations are difficulties with generalizability of findings as well as the author’s subjectivity (Milton, 2002).

Systematic review process

Dickinson's (1999) six key components to the process of a systematic literature review have been incorporated in this dissertation. Firstly the research question leading this study, as mentioned earlier was defined. Secondly research studies were identified. This consisted of a comprehensive database search. AUT e-journals devoted to the relevant age group pertinent to this study were also accessed. A summary of this is provided below. A detailed list of combination search words used is appended.

Search strategy	Number of useful publications located
Database	
PsychINFO	62
Psychoanalytic Electronic Publishing (PEP)	8
Wiley Interscience (Medical Sciences and Psychology)	25
Medline (Ebsco, Ovid and PubMed)	12
ProQuest Dissertations and Theses	1
AUT Library Catalogue	17
Journals	
Infant Mental Health Journal	20
Infant Observation	7
Child development	10
Journal of Child Psychotherapy	2
Websites	
World Association for Infant Mental Health	8
Zero to Three	9

Table 1: Summary of database, Journal and Website search

The non-systematic research methods incorporated were a manual search of the AUT library as well as reference lists of articles and books gathered from database searches. An ad hoc search using the Google search engine was incorporated. This resulted in a few of the same studies gathered through the database search. An interesting blog on the topic was found through this method. A researcher and writer in the field of depression in infancy, Frances Thomson Salo was contacted. She suggested a few books and articles some of which were the same as those found through the database search. She also drew my attention to the World Association for Infant Mental Health (WAIMH) as a possible source of information. Through contact with this association my awareness was drawn to the recently formed Infant Mental Health Association of Aotearoa New Zealand (IMHAANZ). Student membership was applied to both organisations and further information on the topic was sought through their website and through contact with other members. The Zero to Three⁷ website was also accessed for data on the topic.

Thirdly studies were selected based on inclusion and exclusion criteria. Preliminary data gathered on depression in infancy pointed to impairments in the mother infant relationship that could potentially lead to emotional disturbances in this age group. Therefore the initial focus was on mother-infant relationships in general with a psychodynamic framework, which provided a basis for understanding infant development. This was followed by an exploration of impairments that may occur within this relationship that could lead to depression in infancy. Maternal depression and attachment difficulties in the form of avoidant attachment were then focused on in an attempt to explore their correlation with depressive phenomena in infancy. Data on depression in children above three years of age and adolescents was excluded. Information on single or adolescent mothers, maternal substance abuse, incarcerated mothers, poverty and marital conflict as related to maternal depression, maternal anxiety disorders, maternal bereavement, infanticidal thoughts in women, premature infants, infantile anorexia nervosa, infants with disabilities and mother-infant interventions went beyond the parameters of this study and were therefore excluded. Publications not in English were also excluded.

⁷ Zero to Three is an American non-profit organization that informs, trains and supports professionals, policymakers and parents in their efforts to improve the lives of infants and toddlers.

Extraction and synthesis of data are the fifth and sixth components of the literature review. This has been attempted through the understanding of object relations and attachment theory as well as inputs from infant observation research and neuroscience, which address the requirements for optimal development during infancy. This knowledge has been used to analyse data on maternal depression and avoidant attachment and its impact on the infant. Finally inferences have been drawn by combining the two in order to understand how the mother-infant relationship may contribute to the development of depression in infancy. Current clinical data has not been included in this dissertation as this is not the age group I work with in my clinical practice. Furthermore, the vignettes sought from the literature were either too brief or did not fully illustrate the phenomenon of depression in infancy. Nevertheless the various systematic and non-systematic search methods employed resulted in a body of literature that facilitated exploration of the topic.

This chapter has addressed the aims of this dissertation and has defined concepts of evidence-based practice and systematic literature review. The reasons for modifying the standard systematic literature review have been explained. Finally specific methods and techniques employed in the search for literature on the topic have been identified. The following chapter will utilize some of the data gathered in order to begin the exploration of the topic depression in infancy while each of the subsequent chapters will continue this process.

Chapter 3 - How does the infant get to know itself?

Introduction

Research suggests that in the first three years of life the process of getting to know oneself takes place in the context of being known by another i.e. through relationships. Therefore in order to understand infant development and the vital function of the infant's first relationship with its mother it seems prudent to explore object relations theory that delves in this domain. Object relations theory is an adaptation of classical psychoanalytic theory which emphasizes human relationships as the primary motivational force in life. The work of object relations theorist such as Klein, Bion, Winnicott, Balint, and Mahler⁸ will be explored in this chapter. Stern who does not belong to this group but nevertheless has valuable contributions to the understanding of mother-infant relationships has also been included. His contributions are based on active infant research, which provide a deeper understanding of the preverbal infant while the other theorists have based their work on observations of therapist-client (adults and children) relationships as it reflects on the mother-infant dyad which aided their theoretical reconstruction of childhood. A brief compilation of work in the area of infant development research and neuroscience has also been included in order to enhance the discussion in this dissertation. These various theories with their similarities and differences provide a kaleidoscopic view of the infant and are united by the underlying principal that the infant's relationship with his mother is of vital importance for the infant's development.

Brief explanation of some object relations concepts

Object refers to that which is invested with emotional energy i.e. a loved or hated person, place, thing or fantasy, with the first love object being the mother (Hamilton, 1988). Internal objects are mental representations of an image, memory, feeling or fantasy relevant to another person (Hamilton, 1988). In order to maintain an object relationship an infant must be able to distinguish internal from external. Spitz (1965) argues that infants begin life in an objectless stage and eventually acquire the

⁸ Klein and Bion belong to the Kleinian group, Winnicott and Balint belong to the independent group of the British school of object relations while Mahler who does not belong to this group has been categorized in some of the literature as belonging to the American school of object relations.

ability to enter a relationship after maturation of neurophysiologic capacities and through the build up of experiences like feeding and holding.

Melanie Klein

Klein's work is considered to be a bridge between classical psychoanalytical theory based on instinctual drives and theories of object relations based on a relational model (Bacal & Newman, 1990). Through her pioneering work with troubled children she formulated her theories on the inner life of the preverbal infant. She theorized that from the beginning of life the infant is separate and object seeking with an innate relation to the mother's breast and is filled with love as well as complex conflicts of greed, hate and aggression (Klein, 1953). Klein (1975a) further postulates that the infant inhabits a world of deep gratification and extreme discomfort and even terror, comprising of an inner world of phantasy, which is a mental representation of bodily urges as well as active responses to intense drives and feelings. Initially the infant is able to relate to only one aspect or part of a person termed part object the first being the mother's breast (Klein, 1975a). The repeated tactile, visual, auditory and olfactory sensations around feeding contribute to the memory of a good feeding mother, while the same mother when she is unable to alleviate her infants hunger or colic pain can also be connected to unpleasant memories experienced as bad mother (Benedek, 1956). Thus giving and denying gratification, the breast is experienced as good or bad and in relationship with the breast the infant feels good or bad (St Clair, 2000). Thus the infant uses the psychological mechanism of splitting in order to protect itself from the object. This is accompanied by the mental process of projection whereby the infant believes an object is endowed with feelings and impulses which in fact belong to the infant (St Clair, 2000).

Introjection is yet another psychological mechanism employed by the infant whereby things perceived from the outside world are taken in by the infant, such as danger, frustration and sources of anxiety thus becoming internal persecutors (St Clair, 2000). Projective identification conceptualised as a defense is central to Klein's theory and is a form of primitive communication between mother and infant (Grotstein, 1996). It involves an unconscious process in which the infant projects his persecutory experiences by splitting them from his self representation and making them part of the

object and finally re-internalizing this object (St Clair, 2000). Klein (1975a) asserts that projective identification is a means of expulsion of destructive aspects of the self.

Klein (1975b) suggested that during the first year of life the infant moves through two positions⁹ comprising of some of the above mentioned psychological mechanisms. The first is the paranoid schizoid position covering approximately the first three to four months of life. Here the infant is able to relate only to part objects where tolerance frustration is low and anxieties and frustrations are overwhelming for which he uses splitting and projective identification (St Clair, 2000). This is followed by the depressive position beginning at around the fifth month where the infant is increasingly able to relate to whole objects with a recognition that the loved object/mother is outside the self (Segal, 1964). This recognition brings with it ambivalent feelings¹⁰ and guilt over aggression towards the object in the previous stage, and the capability of experiencing loss of a whole object (Kriesteva, 2001). Under normal circumstances a child enters the depressive position with adequate positive experiences with the mother that gets transformed into an internal representation of security and trust empowering the infant to resolve ambivalence. However, if destructive impulses are intense due to an inherent aggressive drive or due to mistreatment, the child is always in fear of destroying the hated but needed object and this leads to guilt, inhibition and depression (Grotstein, 1996). Thus according to Klein (1940) it is not the depressive position by itself that leads to depression, rather it is the inability to successfully resolve ambivalence during this position that may “result in depressive illness” (p. 368).

Klein was unique in her belief of a type of depression experienced during early development (Grotstein, 1996). However, from Klein’s perspective, disturbance is seen as arising from within the infant rather than from external factors. Her emphasis on the infant’s internal world has been criticized for neglecting the external world such as the real relationship with the mother (Sayers, 1991). Infant observation research that developed much later has demonstrated that infants are more reality orientated and have lead to the criticism that Kleinian concepts of phantasy are speculative and obscure

⁹ According to Klein these positions are phases of development or configuration of object relations, anxieties and defenses that persist throughout life (Segal, 1964).

¹⁰ The awareness of love and hate for the same object.

(Seligman, 1999). Nevertheless Klein's presentation of the infant's internal world pioneered the way for future theorist to extend and develop her theories further.

Wilfred Bion

Bion, one of Klein's followers modified projective identification to include the intersubjective dynamics of the concept thus addressing one of the major criticisms of her theory. Bion (1962) was interested in the maternal state of mind, which he described as reverie. This refers to the maternal state of tolerant receptivity that enables her to unconsciously be 'in touch' and make emotional sense of her infant's communications of pain and of expressions of pleasure thus bearing the emotional impact of the infant's projections (Douglas, 2007). Drawing from Klein's ideas Bion developed the concepts of container (mother) and contained (infant) believing that the unintegrated infantile state of mind needs the mother to contain his projective identifications (Grotstein, 1996). According to Bion (1962) the way in which the mother connects with her infant's state of mind constitutes a form of relationship in which, her mind acts as a container, enabling the infant to mature psychologically through her attention and support. Essential to the process of containment is the mother's capacity to tolerate anxiety and uncertainty. Through this process a mother "matches her child's anxieties with her own partly repressed internal object relationships" (Schraff & Schraff, 2005, p. 44). And then by being able to tolerate and not be overwhelmed by her own as well as her child's anxiously viewed parts, she gives them back to the child verbally or nonverbally in a safe, age appropriate and sensitive manner, along with her capacity for tolerance and managing anxiety, which the child can then internalise (Douglas, 2007). This enables the infant to develop his own "internal container" and a gradual ability to process his emotions (Douglas, 2007, p. 31).

This maternal ability to hold her child's needs in mind through containment arises to a large extent from the actual experience of caring for her newborn infant (Shuttleworth, 2002). However, it is variable between different mothers as well as for each mother at different points of time while caring for her infant. When things go well the infant engenders positive states of mind within the mother arousing in her intense identification and empathy, on the other hand when things are difficult these states of mind can be overwhelming, with the infant being experienced as a threat to the mother's own mind and identity. As a result the mother may then withdraw from intimate contact

with her infant (Shuttleworth, 2002). Sensitive support from her partner and maternal figures in her life can contribute a great deal to the mother's ability to contain her infant.

According to Waddell (1998) excessive emotional absence can be experienced by the infant as a "leaky form of containment" (p. 42). The unavailability of the maternal mind into which the infant can project and help contain his distress can lead to overwhelming distress with the infant containing a "nameless dread" (Bion, 1962, p.96). Primitive defences may then be employed against the infant's psychic pain such as excessive projective identification, petrified emotional isolation or deep withdrawal (Waddell, 1998). This can manifest itself in feeding difficulties in infancy which Williams (cited in Waddell, 1998) describes as "convex container", which is caused due to a container pouring projections into the infant rather than receiving them from him (p.44).

Donald Winnicott

Winnicott a paediatrician and psychoanalyst, was influenced by Klein but went on to develop his own paradigm centring on child development and the importance of the quality of relationship between the infant and his mother. One of his most insightful statements "There is no such thing as a baby," suggests that an infant does not exist by himself in a monadic system but is in essence part of a dyadic relationship with his mother (Winnicott, 1964, p. 88). Thus the infant's physical and emotional growth is dependent on a facilitating environment that the mother is able to provide (Winnicott, 1965a).

While Klein elaborated on infancy Winnicott went even further back to the infant's conception. Winnicott (1987) asserts that the infant's self actually begins during pregnancy and is linked to the mother's beliefs on how her developing foetus fits or fails to fit into her imagination and her current emotional situation. Using the term primary maternal preoccupation, he describes the special psychological condition of the mother in the weeks before and after the birth of the child where she is singularly focused on her infant which enables her to respond to him with heightened sensitivity (Winnicott, 1965a). This capacity also enables the mother to provide a holding environment for the newborn in the early weeks of life which, Winnicott (1965a) describes as a period in parental care as well as an environmental provision such as physical holding, which gives an infant a subjective sense of being and is related to the

mother's capacity to identify with her infant. Through reliable holding the immature and weak ego of the infant is made strong by the ego support provided by the mother who has the infant in her mind as a whole person, termed as ego relatedness (Winnicott, 1965a).

Winnicott also emphasized the environmental provision of handling in the form of parental care such as the gentle touching of the infant's body which promotes a strong union of the infant's ego and body resulting in the infant's person being firmly anchored in its own body, fostering a body ego that functions as a base for the infant's emerging sense of self (St Clair, 2000). According to Winnicott the mother evokes her infant's existence in part by mirroring him (Winnicott, 1971). When the infant looks at his mother's face he sees himself, as when the mother looks at him her visage is connected to what she sees in the infant i.e. a mother's pleasure in her child is mirrored in her face and what the infant sees is joy and consequently feels that he is joyful and good (St Clair, 2000). Thus the mother gives back to the infant the infant's own self (Winnicott, 1971). Winnicott states that when the mother behaves in such an adaptive manner the infant has an experience of feeling potent in relation to the environment, as though he created what the mother had given, out of his own imagination and these illusions of omnipotence lay the foundation for the infant's sense of self (Wright, 2003). Ushered by maternal care the infant is facilitated in his journey from an unintegrated state needing absolute dependence, through to relative dependence finally to independence, which is accompanied by structured integration which provides the infant the capacity to relate to whole external objects (St Clair, 2000). Gradually encounters with good objects are sufficiently experienced which forms an inner psychic reality whereby the infant develops the ability to be content in the absence of the external object or the capacity to be alone (Winnicott, 1965a).

All of the above concepts are rooted in Winnicott's (1965b) term good enough mothering which describes the maternal function of providing sufficiently enough for the child to get a good start in life. However, this term by no means implies perfection in the mothering role as Winnicott (1953) notes "the object that behaves perfectly becomes no better than a hallucination" (p. 94).

Conversely Winnicott also addressed the results of maladaptive mothering. He asserts that failure of maternal holding and adaptation to meet and implement the

infant's omnipotence results in the infant experiencing impingements that disrupt his "continuity of being" with chronic failure leading to disintegration or a sense of going to pieces (Davis & Wallbridge, 1981, p. 43). Most environmental failures typically occur postnatally; however, the mother's depression may also cause impingements to the foetus perinatally (Winnicott, 1988). In addition, infants experiencing parental depression at a time of maximal dependence can feel "infinitely dropped" (Winnicott, 1965b, p. 75). Thus while Klein focused on the infant's capacity for depression Winnicott threw light on the effect of the mother's depression on the infant. In cases where impingements occur regularly the infant organizes its functioning around the impingement, one such organization being the development of the "false self" which reacts with compliance in an attempt to defend itself from the trauma of the impingement (Winnicott, 1965b, p. 17). Through this development of the false self the infant survives by adapting to the erratic, weak or absent maternal ego support by the means of the mind by collating, understanding and thinking things out which serve as a substitute for reliable maternal care, thus by understanding too much the infant mothers himself (Winnicott, 1965b).

Although Winnicott's work enriches our understanding of the importance of the maternal role in infant development his writings portray a one-dimensional male perspective on motherhood. There appears to be a lack of adequate recognition of some women's inability, discomfort and ambivalence in being a mother. His term 'good enough mother' although reassuring seems to mask the anxiety, conflict and heavy weight of responsibility one can feel for the welfare of another in the maternal role (Jacobs, 1995). Nevertheless Winnicott's theories provide profound insight into the manner in which environmental shortcomings in early development get translated into psychic difficulties.

Michael Balint

Balint, originally from Hungary and a follower of Ferenczi¹¹, is known for his contributions to psychoanalytic literature with his focus on understanding the landscape of early object relations and its application to psychotherapy (Bacal & Newman, 1990).

¹¹ Sándor Ferenczi was one of the first to introduce the concept of empathy in the analytic relationship. Along with Balint, Melanie Klein was also one of his analysts. He challenged classical psychoanalytical technique which led to the suppression of his ideas for many years (Rachman, 1999).

Balint (1969) used the term primitive relatedness to describe the experience that the foetus has with its intrauterine environment as a “harmonious interpenetrating mix up” (p. 66). He posits that an infant is born in a state of intense biological and libidinal relatedness with the environment and has a new interpenetrating mix up with some aspects of the early extra-uterine environment which become primary substances or objects that the infant takes for granted such as the surrounding air (Balint, 1969). It is thought that the same holds true for the mothering figure during this stage of postnatal life and the wishes of this primary object are felt by the infant to be similar to its own with the mother experienced as wanting to love and gratify the infant just as much as the infant desires this from her. Balint (1969) called this state of relatedness with the primary object, primary love. Some of the distinguishing features of the area of primary love are that there is complete harmony between the individual and environment and neither the individual nor an external observer can define exact boundaries between them.

However, either due to the infants bio-psychological needs which may be too challenging (such as a progressive congenital conditions) or the inability of the environment (insufficient, inconsistent, indifferent care by the primary objects) to fulfill the infant’s psychological needs there may arise a discrepancy which Balint (1969) termed basic fault. The basic fault constitutes the site at which the first major wound occurs in a child’s life. Balint (1969) believed this to be due to the lack of fit between the needs of the infant and the capacity of his early environment to provide these needs which can have long lasting effects on the individual.

Margaret Mahler

Mahler has been included in this discussion although she considered herself to be an ego psychologist because her theory on separation-individuation and concept of object constancy seem pertinent to the topic being explored. Also her work is often cited as a further exploration of object relations theory (Flanagan, 2008). Mahler’s theories were based on observations of normal babies and their mothers. From these observations she inferred preverbal intrapsychic processes taking place within the child in the first three years of a life (St Clair, 2000). One of her observations which partially echoes Winnicott’s concept of mirroring was the importance of mutual cuing as a form of mother infant communication which is a process whereby the infant gives cues of needs, tensions and pleasure and the mother responds selectively to some of these cues

as a result of which a “psychophysiological equilibrium” is attained between mother and infant (Hamilton, 1988, p. 39). Gradually the infant alters behaviour in response to the mother’s selective responses and thus the unconscious needs of the mother activate out of the infant’s potential those characteristics that make the infant the unique child of this particular mother, which contribute to the emergence of the characteristics of the child’s personality (Mahler & Furer, 1968).

Mahler focused on psychological birth which is a process whereby the infant becomes an individual by psychologically separating from the mother (Mahler, Pine and Bergman, 1975). She postulated that the child develops through phases¹² which, begins in the first weeks of life with the normal autistic stage marked by undifferentiation. The symbiotic phase, which follows, is described as an “omnipotent fusion” with the mother which forms a secure foundation for later exploration and independence and for development of the sense of self (Mahler et al., 1975, p. 45). During this phase the infant's dependence on the mother is very strong while motor skills and intellectual abilities are immature. Here the mother functions as the infant’s “auxiliary ego” protecting the infant from impingements and the pressure of having to develop his own resources prematurely (Mahler, 1967, p. 4). According to Mahler et al. (1975) the mother's holding of her infant is one of the most important “symbiotic organizers of psychological birth” (p. 49). This is followed by four sequentially unfolding subphases of the separation-individuation process that begins at 4 to 5 months of age with the hatching subphase where the infant begins to differentiate himself from the mother. Practicing is the second sub-phase; this is marked by the infant’s ability to move physically away from the mother by crawling or standing up with the mother continuing to be needed as a home base for emotional refuelling through physical contact (Mahler et al., 1975). The middle of the second year of life when the infant has become a toddler is designated as the third sub-phase termed as rapprochement which is characterized by an awareness of separateness, separation anxiety and an increased need to be with the mother. The fourth sub-phase is the consolidation of individuality and the beginning of emotional object constancy which begins in the third year of life (Mahler et al., 1975).

¹² Considerable overlapping takes place between these phases and one phase is not completely replaced by another (St Clair, 2000).

Object constancy originates from the infant's psychic and emotional interactions with the environment and is characterised by the "internal mother" or the internalization of a positive inner image of the mother that provides comfort to the infant which enables him to maintain equilibrium in her physical absence allowing him to function separately (Mahler et al., 1975, p. 118). The mother's emotional availability and empathic responses are vital to the process of separation and individuation that enable the infant to explore his world and achieve a capacity for separate functioning in the presence of the mother (St Clair, 2000).

While Mahler's theory emphasizes the achievement of autonomy she misses the importance of the achievement of the equally important task of interdependence (Stern, 1985). Furthermore, this emphasis on autonomy and independence as a reflection of health and maturity are more reflective of a Western individualistic paradigm (Flanagan, 2008). This view would not be shared by collectivist cultures where interdependence is valued. Another critique of Mahler's theory is her tendency to look at the infant's world from an adult point of view (Peterfreund, 1978).

Daniel Stern

Through his work as a developmentalist and psychoanalyst Stern proposed a view of infant intersubjectivity which is based on his observations of infants as well as clinical reconstruction of early experiences which has provided us with a new theoretical view of infants. Stern (1985) disagreed with Mahler's stage of normal autism as his observations showed that infants are deeply engaged in social stimuli although they are unable to differentiate between human and non human stimuli at this early stage. He also differs in his view of Mahler's postulation of undifferentiation during symbiosis. However, he does concur that with regard to core-relatedness pervasive feelings of connectedness and interpersonal well being occur during the second to seventh month of life which encompasses Mahler's symbiotic phase. While Mahler's model implies development begins from a state of connectedness, Stern proposes that achievement of a sense of human connectedness is the final stage of infant development which is a reflection of successful psychic functioning.

According to Stern an infant organizes its experiences through interaction with its environment from birth, the center of which is a sense of self. He proposes four sequentially developing senses of the self that occur in four developing domains of

social experience which are subjective experiences developing out of the two-person matrix of infant and mother. These are the emergent sense of self (0-2 months), core (3-7 months), subjective (8-15 months) and verbal self (15 months onwards). He notes that the infant's first exposure to the human world consists of whatever the mother actually does with her face, voice, body, and hands. This ongoing flow of maternal acts provides the infant with an emerging experience of human communication and relatedness (Stern, 1985).

The importance of matching in mother-infant interactions is emphasized by Stern. This is a process of 'changing with', which is fundamentally dyadic with the mother's behaviour matching that of her infant in shape and intensity. It involves "dynamic micro-momentary shifts in intensity over time, perceived as patterned changes within ourselves and others that allow us to automatically and without awareness, to change with the other and to feel what has been perceived in the other" (Beebe, Sorter, Rustin & Knoblauch, 2003, p. 815). Stern believes that the mother must draw and enhance the infant's attention and involvement by pacing and modifying stimulation in coordination with signs from her infant, through the process of attunement¹³. Here the inner state rather than the external behaviour becomes the referent for the match. Attunement plays an important role in the infant growing to recognise that his internal feeling states can be shared with others which in turn ushers "psychic intimacy" (Beebe et al. 2003 p.816). Stern points that failure of matching leads to failure of attunement or intersubjectivity which can lead to non-attunement¹⁴, selective attunement, misattunement, unauthentic attunement and over attunement. Maternal misattunements can be described as "emotional theft" or stealing of the infant's experience (Stern, 1985, p. 213).

Stern's other prominent work is in the area of motherhood. He comments that with the birth of the infant the mother passes into a new and unique psychic organisation that he calls motherhood constellation (Stern, 1995). Some of the characteristics of this organisation are the mothers concerns for the physical safety and growth of her infant, the mother's social and emotional engagement with her infant

¹³ Attunement shares some aspects with the concept of empathy which refers to emotional resonance and is another important ingredient for optimal mother-infant relationships (Stern, 1985).

¹⁴ Unshareability of subjective experience.

which promotes the infants psychic-affective development, the mother's need to create a support network, and a transformation and reorganising of her self-identity (Stern, 1995). Among these the supporting matrix is vitally important in aiding her role as mother and consequently her relationship with her infant. As reminiscent of Winnicott and Bion's work he emphasizes how maternal representations¹⁵ of her infant, herself, partner, parents and family of origin can influence her ability to mother her infant.

Stern's most fundamental contribution is to bring infant research into the spotlight within the field of psychoanalysis. However, his writings on intersubjectivity seem to favour moments at which the mother attunes to the infant and not infant matching the mother and thus seems to miss the synergistic dance of affect attunement (Beebe et al., 2003).

Similarities and differences

In summary the various object relations theories included in this chapter focus on the mother and infant from different vantage points. However, there are a number of similarities and differences among them. For instance at first glance Winnicott's concept of psychological holding can be linked with Bion's concept of containment. However, although these concepts bear some connections Ogden (2004) argues that they are fundamentally different. He states that holding refers to the mother's physical holding of her infant as well as her role of safeguarding the infant's experience of "being and becoming over time," while Bion's concept of containment is involved with the way we think and how lived experiences are processed as well as the psychical consequence when this is unable to take place (Ogden, 2004, p. 1363). On the other hand Winnicott's concept of impingements and Balint's concept of basic fault converge. There are also parallels between Balint's concept of primary love and Mahler's concept of symbiosis. Furthermore, Mahler's object constancy can be linked to Winnicott's concept of the capacity to be alone.

However, there are differences in the way these theorist view the infant. For instance Klein's infant is consumed with anxiety and racked with destructive drives, linked physically and psychologically to the mother's breast. While Winnicott's infant

¹⁵ Representations are based on and built up from subjective experiences of interactions (real, lived or fantasized) with another person.

is contact seeking from the beginning. In contrast Mahler's infant seeks separation from dual unity in order to individuate while Stern's infant interacts with his environment from birth gradually progressing to a state of deeper connectedness.

With regard to the mothering role, Klein and Bion postulate the internal processing functions of the mother in contrast to Winnicott who describes the mother's physical caregiving functions. In addition, Bion emphasizes the maternal state of mind that enables the infant's psychological development. While Winnicott parallels this concept, he and Stern also emphasizes the facilitating environment and maternal matrix that assists the maternal state of mind.

Infant development research

Observation of mother-infant interactions offers a different perspective from talking to mothers about their infants. Similarly, attempting to make sense of the infant's part in mother-infant interactions is subtly different from intuiting the infant's subjective experience (Wright, 1993). While the theorists mentioned above adopted different approaches to generate their own image of the infant and mother, infant development research is rooted in observation of mothers and infants.

Reciprocity is one of the key observations cited in infant development research and is linked to intersubjectivity. Reciprocity can be defined as the sophisticated interactions between an infant and adult wherein both are involved in initiation, regulation and termination of the interaction (Douglas, 2007). Brazelton, Koslowski and Main (1974) described reciprocity from research carried out on frame-by-frame analysis of filmed mother-infant interactions. From their analysis they found that mother-infant interactions involved a dance like pattern involving seven components: initiation, orientation, state of attention, acceleration, peak of excitement, deceleration and withdrawal or looking away (Brazelton et al., 1974). Of interest to the central topic of this dissertation are two qualitatively different types of the final phase of withdrawal or looking away that were observed. One type involved the infant momentary shutting down to decrease inward stimulation.¹⁶ The second type was a more intense turning away for the same purpose occurring when the infant felt overwhelmed or found the

¹⁶ This was done by playing with his own clothes, sucking his fingers which were employed to decrease attention on the mother while still maintaining contact with her by keeping her in peripheral vision while at the same time not providing a new focus of attention.

situation unpleasant. Some of the strategies adopted by the infant were actively withdrawing by arching away, rejecting stimulation/mother by pushing the other away with his hands and feet; decreasing the power of the stimulation to disturb by falling asleep, yawning or dulling his senses, and by signalling discomfort by fussing or crying (Brazelton et al., 1974).

Another observation is the importance of vocalizations as a primary means of communication used by preverbal infants to communicate with others (Hsu & Fogel, 2001). When vocalizations are characterized by a "dancelike mutual involvement, a symmetrical partnership is shared between mothers and their infants" which, is characterized by maternal responsiveness and "mutual dyadic creativity" (Hsu & Fogel, 2001, p. 89). Similarly, Kugiumutzakis (1993) comments, mirroring and vocal exchanges between infants and their mothers is an integral part of intersubjective communication. Brazelton and Cramer (1990) remark that the earliest sequence or rhythm of interaction such as mutual gazing, smiling, vocalization and looking away between infant and mother are based on imitative behaviour they call "entrainment" (p. 124).

Brazelton et al., (1974) observe that the caregiver provides a holding framework for the infant, with hands, eyes, voice, and smile changing from one form of stimulation to another, which provides opportunities for the infant to learn how to contain himself and control motor responses which amount to a learning about organisation of behaviour. Brazelton and Cramer (1990) explain that synchrony is an important characteristic of successful mother-infant relationships. By learning the infant's language as reflected by motor, attentional and autonomic behaviour as well as emotional states, mothers can synchronize their own states of attention or inattention to their infant (Brazelton & Cramer, 1990). The rubric of maternal responsiveness also consists of contingency, which involves a pattern of appropriate responses to the infant's signals, needs and emotional communications by the mother which she displays through her cognitive and emotional availability (Brazelton & Cramer, 1990).

In contrast to the infant postulated by the various theories mentioned earlier the observed infant is a reality based, active participant in interactions with his mother.

Neuroscience perspectives on infant development

Neuroscience provides us with a scientific lens through which we can understand infant development. Although genetics play an important part, much of the infant's brain is developed after birth (Brainwave Trust, 2008), so much so that the newborn infant is referred to as the "external foetus" (Sunderland, 2006, p. 20). Perry (2002) asserts that neural systems responsible for our physiological, cognitive, emotional and social functioning are developed in infancy and are sculpted by both positive and negative early mother-infant interactions. Healthy, optimal development of these neural systems is dependent on attentive and nurturing caregiving in infancy (Perry, 2002). According to Siegel (1999) interpersonal experience plays a crucial role in determining the development of brain structure during infancy and has an impact on the ongoing development of brain function throughout the lifespan. Furthermore, experiences such as touch during infancy activate specific neuronal connections that create new synapses and strengthen existing ones (Siegel, 1999). Similarly, Barnett (2005) notes that touch is important for brain development, reduction of stress in both infants and carers and serves as a component of mutual regulatory process. Positive, warm, attentive touch and interactions between parent and child activates the release of hormones such as oxytocin¹⁷ and opioids in the infant's developing brain creating a secure bond between parent and child (Sunderland, 2006). Unsupportive and neglectful caregiving on the other hand has been found to produce elevated levels of cortisol which is a stress hormone, potentially impairing brain development in infancy (Gunnar & Quevedo, 2007). Thus neuroscience gives us the image of the infant, dependent on positive interactions with its caregiver which are crucial for brain development.

Conclusion

In conclusion, various psychodynamic theories have been explored to demonstrate how the infant gets to know himself in relationship with his mother. These theories have been complimented by infant development research and neuroscience. The highlight of this chapter is the important role that the mother plays in the infant's emotional development. However, the theories of Bion, Winnicott and Balint tend towards mother centrism which can lead to mother blaming. However, this focus on

¹⁷ Oxytocin is primarily secreted in the mother during labour and breastfeeding and is also found in infants during the first 2 weeks after birth.

mothers is reflective of the social and cultural milieu of the times in which they were written. Nevertheless, it is important to bear in mind that the various theoretical perspectives describe a quality of parenting that the dependent infant is in need of from the very early stages of development and can be applied to the parent irrespective of gender. However, impairments can occur within this dyad that can impact their relationship and consequently the infant's optimal development. While the rich tapestry that the various theories have woven help hold the infant and mother in mind, the next chapter will explore one such impairment to the mother-infant relationship which is maternal depression.

Chapter 4 - Impact of maternal depression on infancy

It was very routine...I was doing it because I knew that was what I had to do, feeding and changing her. I suppose there was just a distance. I was just going through the motions...I was doing absolutely everything I should do, but I wasn't – with Adam I used to sit and gaze at him and look at how gorgeous he was, and with her I found that really difficult...We didn't name her until the day before we had to register her. It was something I found incredibly difficult because I hadn't allowed myself to think that I was going to have a baby...I just looked at her and I didn't know who she was

from an interview with a mother with postnatal depression (Rance, 2005, p.125).

Introduction

Chapter one focused on theories that describe the important role of the relationship between mothers and infants that fosters development in infancy. As alluded to in the previous chapter all is not idyllic during this early period and impairments can occur in some dyads, resulting in the formation of a basic fault due to a lack of fit between mother and infant. Since the onus of this early relationship is largely dependent on the maternal provision of a facilitating environment an impairment originating in the mother through her depression will be addressed in this chapter. The emphasis on mothers is due to several factors, such as statistics that show twice as many women as compared to men have depression (McGrath, Keita, Strickland & Russo, 1990). Furthermore, depression is more common among women of childbearing age (O'Hara, 1997) and women have been found to be more involved as compared to men in raising children (Gurian, 2003). Two questions arise from the selection of this impairment. Which are: Can a depressed mother be a good enough mother? And how does the infant of a depressed mother come to know himself? This chapter will attempt to answer this question by exploring the ways in which maternal depression can cause impairments in the mother-infant relationship. Furthermore, studies have shown that children of parents with affective disorders display higher rates of similar disorders as compared to children in the general population (Weissman et al., 1987). Keeping this in mind the contribution of maternal depression to depression in infancy will also be explored.

Maternal depression

Depression is one of the most common affect disorders in adults (Goodman & Gotlib, 2002). American studies show about 40 to 70% of new mothers have postnatal depression, which can last for up to three months (Levy & Orlans, 1998). From a New

Zealand perspective, one in five women¹⁸ has been found to experience depression (Mental Health Foundation of New Zealand, 2008). A 2005 Auckland study, that surveyed European/Caucasian women at 4 months postpartum, found that 30% were suffering from depressive symptoms and only 13% of those were in treatment (Thio, Oakley-Browne, Coverdale, Argyle, 2006). The most risky time for women to become mentally unwell is after giving birth and 10-15% of women are said to suffer from postnatal depression (Mothers Matter, 2008). These findings suggest that a large number of infants are exposed to maternal depression. How does maternal depression then impact the infant who is dependent on the evolving relationship with his mother for his development?

Types of maternal depression

To begin answering the above questions, types of maternal depression first need to be clarified. There are three major classifications of depression which are relevant to the study of the mother-infant relationship. These are major depression, dysthymia and postnatal depression. The former two are categorized in the Diagnostic and Statistical Manual of Mental Health Disorders (DSM-IV-TR, 2000) as well as the Psychodynamic Diagnostic Manual (PDM). However, it is the latter condition that provides a plethora of research data for investigation. Major depression encompasses severe depressive symptoms while dysthymia involves chronic but less severe symptomology and may be included in postnatal depression though they are not limited to the latter condition (APA, 2000).

Postnatal depression

Postnatal depression is a mood disorder that begins after childbirth and usually lasts beyond six weeks (O'Hara, 1994). It can range from early onset, transient depression termed as 'baby blues' a mild brief experience during the first days or weeks after birth with symptoms such as tearfulness, irritability, anxiety and mood changes which normally disappear within two weeks without requiring specific treatment apart from understanding and support (Anthony, 1983). While on the other end of the spectrum lies a more rare condition, postnatal psychosis, which consists of delusions, hallucinations and gross severe impairments in functions, beginning within four weeks

¹⁸ While one in ten men have been found to experience depression in New Zealand.

following birth (O'Hara, 1997). Within this spectrum lies more consolidated clinical depression that can run an irregular course which involves symptoms of sadness, crying spells, passive or withdrawn behaviour, restlessness, lack of energy, chronic tiredness, inability to sleep, change in appetite, significant weight loss or gain, neglect of personal care and appearance, indifference to social interaction, slow movement (as well as thought and/or speech) excessive guilt and suicidal ideation (APA, 2000, PDM Task Force, 2006, Appleby, Mortensen & Faragher, 1998). Maternal attitude toward the infant can vary from disinterest, fear of being alone with the infant or over-intrusiveness in caring for the infant (APA, 2000). In general postnatal depression has been found to persist over several months (O'Hara, 1994). In addition, women who have experienced postnatal depression have been found to have an increased risk for future depression over a 5-year period (Cooper & Murray, 1995).

The etiology of postnatal depression has been found to range from a combination of factors such as previous history of depression, marital conflict, lack of social support, economic factors, conflict regarding the maternal role, inadequate maternal representation as well as biological factors such as the deluge of hormonal fluctuations during this period (O'Hara, 1997, Gurian, 2003). The characteristics of infants themselves, such as birth complications and infant irritability, which make them difficult to care for, have been found to increase the likelihood of postnatal depression (Murray, Stanley, Hooper, King & Fiori-Cowley, 1996). However, Murray (1997) comments that neonatal behaviour such as irritability is often a product of maternal factors such as previous history of depression.

Research on mothering by depressed mothers

A range of research has investigated how depressed mothers, mother their infants. A selection of studies has been presented below which cover different aspects of the mothering role.

Depressed mother's perceptions of her infant

A study conducted by Hart, Field and Roitfarb (1999) found that depressed mothers' perceptions of their neonates who were assessed at delivery and at 1 month was more negative compared to that of independent examiners. These mothers regarded their infants as less cuddly and more fussy. The mother-examiner discordance suggests distorted perception due to depression.

Depressed mother's interactive style

Postnatal depression has been shown to adversely affect mother-infant interactions as early as 2 months after birth (Cohn, Campbell, Matias, & Hopkins, 1990). Unlike non-depressed mothers who are usually responsive to their infant's cues and display positive affective expression, depressed mothers are frequently withdrawn, unresponsive, present flat affect, low levels of contingent stimulation and less positive affect and responsiveness (Pelaez-Nogueras, Field, Cigales, Gonzalez & Clasky, 1994; Feng, Shaw, Skuban & Lane 2007). Research conducted by Field et al. (1985) found that depressed mothers were more punitive and displayed anxious behaviour towards their 3 to 5 month old infants. Even mildly depressed mothers have been found to show less gazing behaviours, less unconditional positive regard and more shifting and discontinuity in rocking motions while holding their newborn infants (Livingood, Dean, & Smith, 1983). A study conducted by Murray, Fiori-Cowley and Hooper (1996) found that as compared to non-depressed mothers, depressed mothers were less sensitively attuned to their infants, less affirming and more negating of their infant's experience and less likely to offer contingent stimulation to their infants. Some depressed mothers have been found to interact with their infants in an aggressive and intrusive manner (Cohn, Matias, Tronick, Connell, & Lyons-Ruth, 1986). Intrusive style of interacting which included behaviours such as poking, tickling, restraining and abruptly offering or withdrawing a toy, which tend to over stimulate the infant, have also been found among some depressed mothers (Hart, Field, del Valle & Pelaez-Nogueras, 1998).

Facial expressions and activity levels

Depressed mothers have been found to smile less, have less facial expressions and less exaggerated facial expressions compared to mothers who are not depressed (Field et al., 2007).

Speech and vocalizations

Research on depressed mother's speech to their infants found that they expressed more negative affect, were less focused on infant experience and tended to show less acknowledgement of infant agency (Murray, Kempton, Woolgar & Hooper, 1993). Compared to well mothers, the speech of depressed mothers focused more on the mother's own agenda or to events and objects unrelated to the immediate mother-infant contact. This is consistent with the research conducted by Radke-Yarrow, Belmont, Nottelmann and Bottomly (1990) that found compared to non-depressed mothers;

depressed mothers of two-to-three year olds voiced more explicit negative evaluations and expressed less recognition of their children's individuality. Fleming, Flett, Ruble and Shaul (1988) also found that depressed mothers tend to engage in fewer vocal exchanges with their infants, which tend to be non-exaggerated and intonationally constricted. Likewise a study conducted by Bettes (1988) demonstrated that depressed mothers vocalizations lacked 'motherese'.¹⁹ Compared to non-depressed mothers these mothers failed to make adjustments to their vocal behaviours in response to their infant's vocalizations. Stern, Spieker, Barnett and MacKain (1983) comment that depressed mothers have been found to not only take longer to respond to their infants but their utterances are also less likely to be imbued with affective signals that are an important part of affect modulation.

Touch

Research shows that although depressed mothers do engage in necessary caretaking activities they tend to display less affectionate physical contact and touch with their infants as compared to non-depressed mothers (Field et al., 2007). Depressed mothers have also been found to abandon breast feeding after a short duration or only chose to bottle feed their infants (Campbell, Cohn & Meyers, 1995). This reflects some depressed mother's feelings about bodily contact and affection.

Synchrony

Field, Healy, Goldstein and Guthertz (1990) evaluated synchrony among depressed mothers and their infants. They found that depressed mothers spent more time in negative attentive/affective behaviour states than in positive states. Three patterns emerged among the depressed mothers, which are as follows. Disengaged mothers showed disengaged/disinterested behaviours more frequently, intrusive mothers showed angry/rough behaviours more often and mixed mothers frequently displayed both disengaged and angry behaviour states. Irrespective of the maternal pattern of interaction the infants of the depressed group were found to display more general negative affect than infants of the control non-depressed group. The findings of this study indicate that infants of depressed dyads resonated more to their mothers' negative behaviours while infants of the non-depressed group resonated to their mothers' positive responses. Notably the times spent in matched affective and behaviour states were less

¹⁹ Motherese is set apart by other speech patterns due to features such as timing, rhythm and exaggeration of intonation which is commonly found in mother-infant verbal interactions.

among the depressed dyads. It seems that the depressed mother's preoccupations or reluctance to interact with her infant prevent her from understanding the cues crucial for the development of synchrony. Livingood, Dean and Smith (1983) comment that depressed mothers respond more to their own internal needs rather than those of her infant. These findings imply that infants of depressed mothers learn that their behaviour has minimal impact on their mother's behaviour.

Depressed mothers' beliefs and attitude

In addition, depressed mothers have been found to express more guilt about their infants and child rearing styles (Cramer, 1993). These mothers have also been found to lack self esteem and display more doubts about their maternal competence (Gordon et al., 1989).

Impact of maternal depression on infants

Various studies have documented the impact of maternal depression on infants. A few of them have been cited as follows. 'Depressed' behaviour in infants mentioned in these studies refers to low affect, poor motor activity, passivity and marked gaze aversion and not a clinical diagnosis as such.

Still face experiments

The earliest research on how infants are affected by maternal depression comes from the landmark still face experiments, which attempt to examine infants' response to reduction in mothers' responsiveness (Luby 2000). Cohn and Tronick (1983) used this method to test healthy 3 month old infant's reaction to their mother's simulated depression during face to face interaction. Mothers were asked to interact with normal and/or depressed maternal behaviours with their infants. Depressed interactions included slowed and flat toned speech, reduced facial expression and limited body movement and touch. In comparison with the control group infants exposed to depressed maternal interactions responded by protest (crying, fussing, grimacing, arching back); wary state (serious or sober facial expressions while looking toward mother); looking away coupled with less engagement in positive play behaviours. Furthermore, these negative patterns continued briefly even after the mothers resumed normal behaviours (Cohn & Tronick, 1983). This demonstrates that young infants are able to perceive the affective quality of their mother's responses and accordingly adjust their affective responses to them.

Field (1984) used the above technique with infants of naturally depressed mothers and found that unlike in the Cohn and Tronick (1983) study these infants did not react with protest and distress instead they showed inattentive behaviour, flat affect and less motor activity. This suggests that these infants had become accustomed to the unresponsive, unavailable depressed maternal behaviour (this was also confirmed by a more recent study by Field et al., 2007). Strikingly these infants were described as being mirror images of their mothers (Field, 1984; Hoffman & Drotar, 1991). This implies that infants may experience a lack of potency and regulation during repeated interactions with their depressed mother leading to a development of a passive and depressed style of interacting.

Gaze aversion and stress

Gaze aversion has been found to be more frequent in infants interacting with their depressed mothers suggesting that it is stimulus-specific i.e. more frequently elicited by depressed maternal behaviour (Cohn et al. 1986). Self regulatory behaviour such as head and gaze aversion have been found excessively in infants of depressed mothers indicating their attempts to reduce negative affect engendered by unresponsive maternal behaviour (Tronick & Gianino, 1986). Due to repeated exposure to their mother's failure to respond contingently to infant's signals the infant abandons approach strategies such as signalling the mother in favour of withdrawal strategies as a means of self regulation (Tronick & Gianino, 1986). This is supported by research conducted by Zekoski, O'Hara and Wills (1987) that found infants of depressed mothers experienced more distress specifically when interacting with their mother in a depressed mood state as compared to her neutral or elevated mood. Field et al. (1988) found that infants of depressed mothers had higher heart rate, lower vagal tone²⁰ and higher cortisol levels than infants of non-depressed mothers. This suggests that infants of depressed mothers experience their mothers as stressful.

Brazelton and Cramer (1990) comment that depressed mothers tend to be inconsistent in their responses to their infant, fluctuating from responsiveness to unavailability and rejection thus constantly frustrating the infant which is likely to increase stress in the infant. This stress response does not only include gaze aversion, and unwillingness to engage socially but also gastrointestinal distress, loss of appetite

²⁰ Is a measure of heart rate variability and is believed to indicate central nervous system functioning. Vagal tone is considered to be an indication of infant's ability to sustain attention and regulate emotion.

and autonomic fragility (Crittenden, 1987). Since stress is not consistently minimized in infants of depressed mothers due to the mother's tendency to be unresponsive to the infants' needs (such as delaying a feeding or nappy change), these infants have been found to respond more quickly to stress than other infants (Whiffen & Gotlib, 1989).

Sleep and eating difficulties

Severe sleep disturbances, eating problems and temper tantrums were found among 18 month olds with depressed mothers compared to their counterparts with non-depressed mothers (Murray, 1992).

Withdrawal

Infants of depressed mothers have been found to appear withdrawn, have less activity levels and vocalizations (Field, 1984). A recent study by Mäntymaa et al. (2008) also found sustained withdrawal²¹ among infants of depressed mothers.

EEG patterns

A study conducted by Field, Fox, Pickens and Nawrocki (1995) found that infants as young as 3 months whose mothers were depressed, demonstrated similar kinds of EEG (Electroencephalography) patterns as those found in adults with depression. Specifically researchers have found that infants of depressed mothers' exhibit reduced left frontal electrical brain activity during a baseline condition²² and during playful interaction with mothers and familiar adults (Dawson et al., 1999). Other factors such as genetics and prenatal exposure to maternal depression can also contribute to this atypical brain activity (Ashman & Dawson, 2002). These findings neurologically demonstrate that when a mother is depressed the perception of that emotion can trigger a similar feeling of depression in her infant (Davidson & Fox, 1982).

Cognitive development

Children of depressed mothers aged 42 months were found to perform more poorly on IQ tests²³ as compared to the same aged children of non-depressed mothers

²¹ Assessed using the Alarm Distress Baby Scale (ADBS).

²² A phase conducted during an experiment where the independent variable, event or variable manipulated by a researcher is absent.

²³ A shortened version of the Wechsler Preschool Primary Scale of Intelligence (Revised) was administered to these children. This test assesses intelligence in children aged 3 to 7 years.

(Milgrom, Westley & Gemmill, 2004). In addition, male infants of depressed women as compared to non-depressed women were found to display low intellectual scores during their first year even when their mothers recovered from depressive symptoms during this period (Sharp et al., 1995). A study conducted by Pound (2005) found that maternal depression was associated with behavioural difficulties in 4-8 month old infants. These infants were less enthusiastic about exploring their environment, less interested in their social environment, less persistent at completing tasks and were less adaptable to change. In contrast to the studies mentioned above no impairments were found in these infants' cognitive and motor development. Pound (2005) asserts that these infants' behavioural deficits were associated with the maternal mode of interaction which was unresponsive rather than maternal depression per se.

Heightened sensitivity

Children of depressed mothers, aged 2 and 3 years were found to become more upset and preoccupied when exposed to conflict or distress, were more appeasing in play with peers and displayed more comforting/caregiving responses to their mothers as compared to same aged children of non-depressed mothers (Zahn-Waxler, Cummings, Iannotti, Radke-Yarrow, 1984). This shows that some children of depressed mothers have a heightened sensitivity and sense of responsibility for other's distress.

Style of interaction with non-familiar and familiar non-depressed adults

Field et al. (1988) also explored whether depressed behaviour of 3 to 6 month old infants seen during interactions with their depressed mother was generalized to non-depressed unfamiliar female adults. Infants were monitored both behaviourally and physiologically (through heart rate and saliva samples for assessing cortisol levels) while interacting with their mothers and a stranger. Results found that positive interactions were markedly lower for depressed mothers and infants as compared to non-depressed mothers and their infants. These infants were also found to perform more poorly when interacting with the stranger thus confirming that their depressed style of interacting was pervasive and generalized from interaction with their depressed mothers to non-depressed adults.

In contrast research conducted by Hossain et al. (1994) found that infants' depressed behaviours with their depressed mothers did not generalize to their interactions with their non-depressed fathers. This suggests that non-depressed fathers may buffer the effects of maternal depression on the infant. In addition, Pelaez-

Nogueras et al. (1994) found that infants' depressed behaviour with their depressed mothers did not generalize to their interactions with their non-depressed nursery teachers. Thus unlike the research mentioned earlier this data suggests that that infants respond differentially to depressed and non-depressed *familiar* adults.

The above studies demonstrate that maternal depression can adversely impact the physical, behavioural, neurological and most importantly emotional development in infancy. However, Campbell, Cohn and Meyers (1995) highlight that the diagnosis of depression per se in the postnatal period is not necessarily associated with impaired mother-infant interaction; it is the duration and chronicity of depression that has the foremost impact on negative mother-infant interactions. In addition, it has been found that mothers who had recovered from depression continued to exhibit a persistence of inhibited and hostile communication with their 19 month old infants (Stein et al., 1991). Murray (1992) similarly asserts that remission of maternal depression by 3 months postpartum does not bring about an improvement in the mother-infant relationship. Thus although maternal depression is highly likely to have negative outcomes for the developing infant, the focus needs to be on the mother-infant relationship and not only maternal depressive symptoms.

Does maternal depression lead to depression in infancy?

The research studies investigated above demonstrate that compared to infants of non-depressed mothers, infants with depressed mothers display more non-optimal behaviours such as lower activity levels, greater irritability and withdrawal. The evidence suggests that the depressed mother's interactive style infused with her insensitive behaviours may account for some of these effects. Thus infants of depressed mothers may not only be exposed to and experience more negative affect than other infants but they also lack appropriate parental support to develop adaptive regulatory strategies to cope with distressing emotions (Ashman & Dawson, 2002). In addition, Anthony (1983) asserts when the mother is depressed the infant can get enmeshed in her depression and one means of extricating himself can be through the use of withdrawal mechanisms. Cumulatively these factors can potentially increase the risk for developing depression in this age group. However, Tronick, Als, Adamson, Wise and Brazelton (1978) asserts that infants who manifest depressive symptoms are not actually depressed; rather they are demonstrating their sense of impotence towards their mother's lack of responsiveness.

This discussion however, is incomplete without addressing the infant's temperament. Therefore this facet as connected to the mother-infant relationship is discussed as follows.

Temperament

Temperament has been defined as stylistic qualities of personality and consistent patterns in how actions are performed which are constitutionally rooted and salient very early in life (Thomas & Chess, 1977). The temperament categories allocated to infants are difficult, slow to warm, easy and mixed²⁴ (Chess, Thomas & Birch, 1959). A certain type of temperament in one infant may be difficult for one mother but not difficult for another. Chess and Thomas (1987) comment that a poor fit between infant and parent's temperament often accounted for mother-infant difficulties. Furthermore Benedek (1956) suggests that a depressed mother may prefer a more passive infant and may find an overactive infant too difficult to handle.

While many of the studies cited earlier explain maternal depressive interactive style as a contribution for depressed and withdrawn behaviour in infants a study by Field et al. (1985) attempted to explore whether these infants were depressed prior to experiencing early interactions with their mothers. Mothers who were identified with depression during pregnancy and who had postnatal depression after delivery were filmed interacting with their infants. The neonates were given the Brazelton Neonatal Assessment²⁵ following delivery, and were reported as having lower activity levels and responsivity to social stimulation compared to the control group of infants with non-depressed mothers. This illustrates that the infants diminished activity levels and responsivity commenced from birth.

In addition, a study conducted by Abrams, Field, Scafidi and Prodromidis (1995) found that newborn infants whose mothers were assessed as depressed during pregnancy upon administration of the Brazelton Neonatal Assessment Scale 24 hours after birth were found to display decreased motor tone, lower activity levels, lethargy, irritability and were unresponsive as compared to infants of non-depressed mothers. This study demonstrates that infants of depressed mothers show non-optimal behaviours

²⁴ Refers to infants who display a combination of the other temperamental traits.

²⁵ Was developed by Dr T. B Brazelton. It is used to assess infant's (newborns – 2 month olds) pattern of responses to his environment.

at birth. The researchers suggest that their findings may imply that infants of depressed mothers may also contribute to the difficult mother-infant interactions. However, Abrams et al. (1995) imply that depression during pregnancy may impact the developing foetus.

A vicious cycle may develop in infants who are not immediately responsive to their mothers' efforts to satisfy their needs which Cline (cited in Levy & Orlans, 1998) termed the "vicious cycle of the unresponsive infant" (p. 59). As a result of the infant's difficulty in being soothed, mothers may become anxious, angry and insecure losing their confidence in their own care-giving abilities and may also become withdrawn or increasingly intrusive or punitive and eventually the infant responds to the mother with heightened stress and anxiety by becoming increasingly anxious, fearful and unresponsive (Cline cited in Levy & Orlans, 1998). Mothers of excessively crying infants have been found to be more anxious and tentative in dealing with their infants (Levy & Orlans, 1998). Consequently anxious mothers have been found to respond with feeling exasperated, less confident, frightened, confused, resentful and unloving with some feeling extreme hostility towards their infant (Jones, 1983). Research has found that children with 'difficult' temperaments develop emotional and behavioural problems over time; however, this is not attributed to temperament alone the reaction of parents to the child's temperament can amplify or diminish certain inborn traits and qualities (Levy & Orlans, 1998). Mothers who are empathetic, have emotional maturity (emotionally resolved) as well as those who have external support are found to manage their irritable infants better (Belsky & Isabella, 1988). Thomas, Chess, Birch and Hertzog (1960) assert that neither temperament nor parental characteristics alone are responsible for the child's development. The two are intrinsically intertwined. The essence here is the vital mutuality of early mother-infant interactions.

Non-organic failure to thrive

Non-organic failure to thrive (NOFTT) in infancy and childhood has been defined as failure of physical growth, malnutrition and retardation of motor and social development with no clear organic aetiology (Glaser, Heagarty, Bullard, Pivchik, 1968). These infants display characteristics such as unusual watchfulness, diminished vocalizations, poor feeding ability and poor weight gain, low behavioural reactivity, lethargy, passivity, decreased motor activity, irritability, are resistant to touch, indifferent to separation, withdrawn and developmentally delayed (Bithoney, Dubowitz

& Egan 1992; Powell & Low, 1983). Although challenged by some researchers this condition has been attributed to inadequate maternal stimulation or maternal deprivation which in some cases is due to maternal depression (Fraiberg & Adelson, 1976). This attribution is because the infant's growth retardation is often reversed during hospitalization when the infant is provided more adequate stimulation than what is routinely provided in the home environment (Field, 1987). The interactive style²⁶ found in mothers of NOFTT infants are similar to those found in depressed mothers. Temperamentally these infants are characterised as difficult by their mothers (Steward & Garvin, 1997) and may be constitutionally vulnerable and thus contribute to their own growth failure (Crittenden, 1987). Notably these infants are also found to come from highly stressful environments with extreme intra-familial and psychosocial stressors (Guedeney, 2000). The similarities between NOFTT and depression in infancy are striking. Interestingly Powell and Bettes (1992) point out that depression in infancy may be applied in the diagnosis of NOFTT as the characteristics of NOFTT are symptomatic of depression in this age group.

Application of theory

The various psychodynamic theories illustrate that the infant is intrinsically connected with the emotional life of its mother. As seen in the previous chapter the essential feature for healthy development in infancy is a stable mother-infant relationship which is characterised by emotional warmth, attention, availability, reciprocity and tolerance for helping the infant deal with overwhelming affect which in turn facilitates the infant's development of autonomy. By the very nature of the symptoms of maternal depression one can postulate that a depressed mother's ability to provide her infant with a facilitating environment is highly compromised.

One can hypothesize that for a depressed mother her primary preoccupation would be with herself and her depressed state rather than her infant. In the case of severely depressed mothers Anthony (1983) comments that one could say "there is no such thing as a mother: there is only a self-absorbed, inwardly directed, hungry, and empty woman-infant who does not qualify to be a mother since she cannot begin to perform adequately the complete repertoire of mothering tasks" (p. 8). In such a scenario one can hypothesize that the infant exists psychically alone. Also containment

²⁶ Additionally some of these mothers have been found to be neglectful and abusive of their infants (Crittenden, 1987).

and projective identification require sensitivity and empathy on the part of the mother to the intrapsychic condition of the infant through which she is able to differentiate affect aroused in her, from that triggered by her child through the means of “affective resonance” (Brisch, 1999, p. 50). This process seems compromised in the mother-infant dyads in the various research studies presented above. Furthermore, a reversal of the projective identification seems to take place in such dyads. Bollas (1999) comments that depression can be passed on by the mother to the infant through the means of introjection whereby the internal object arrives in the infant’s internal world due to parental projective identification.

Thus although the depressed mother may be physically able to hold her infant, being depleted herself, she may be unable to psychologically hold him especially his projections of negative affect which she is likely to find overwhelming. Thus her empathy, containment and attunement are highly likely to be impaired. From the research studies highlighted above it can be seen that reciprocity and synchrony are impaired when the mother suffers from depression. They illustrate that the reciprocal dance between these mothers and infants is infused with more instances of withdrawal on the part of the infant in order to shut down overwhelming stimuli from the depressed mother. The infant’s need for mirroring also seems to be compromised in these dyads. These mothers are more likely to reflect their depressed mood, anxiety, tearfulness, hostility and/or irritation to their infants. In the absence of optimal maternal mirroring the infants in the above research studies seem to mirror their mothers’ depressed behaviour. Winnicott (1958) illustrates this by stating that depression of the child can be the reflection of the depression in the mother. Touch, mutual gazing and vocalizations that form the repertoire of preverbal communication between mother and infant were also shown to be missing in the above studies. Thus the mother’s depression constitutes the basic fault that separates mother from infant while temperamental factors may also contribute to separating infant from mother, keeping them psychologically isolated. This consequently leads to a failure in mutuality in interaction between these dyads which can potentially lead to depression in infancy.

Conclusion

The postnatal environment makes numerous physical and emotional demands on a mother. These demands coupled with her depression can be extremely challenging for her especially if she is a first time mother. Moreover the symptoms of depression in

infancy such as irritability, excessive whining and eating and sleeping difficulties would pose a number of difficulties with mothering such an infant (Thomson Salo, 2001b). The various research studies along with the application of theories provide compelling evidence that the depressed mother's capacity to be a 'good enough mother' is gravely compromised. The studies also demonstrate that depression in the mother can be transmitted to her infant through the maternal environment. However, the progression of maternal depression to depression in infancy is not linear. The infant also has an effect on the mother. Thus, the impact of the infant's constitution and temperament also need to be considered. The complex phenomenon of nonorganic failure to thrive in this age group also needs to be included in understanding the manifestation of depression in infancy. Importantly infants depressed interaction style was not found to generalize to interactions with other non-depressed familiar adults. Therefore role of fathers and other social supports (although beyond the scope of this dissertation) that can buffer the infant exposed to maternal depression also need to be taken into account. Similarly, the presence or absence of fathers (and their psychopathology), marital discord and economic distress (once again beyond the scope of this dissertation) also need to be included in understanding their contributions to the manifestation of depression in this age group. A prominent point in this chapter is that the interactive styles found in depressed mothers (withdrawn and intrusive) can persist even after her depressive symptoms decline. However, these findings of deficiencies within depressed mother-infant dyads are incomplete without considering how attachment may be flawed in these dyads and consequently how this may contribute to depressive symptomatology in infancy. The next chapter therefore focuses on the correlation between attachment and depression in infancy.

Chapter 5 - Correlation of attachment to depressive phenomena in infancy

“Well, actually I will try and play with Shana, but I often notice that she doesn’t need me. It makes no difference to her, whether I am with her or not.”

“Look! This is what she always does! She never looks at me! She takes every opportunity she has to avoid my face!”

from videotaped observations of depressed mothers and their infants (Vliegen, 2006, p. 264, 266).

Introduction

Although a number of researchers have differing views on what constitutes depression there is a consensus among many that affect and depression are strongly related (Trad, 1986). It seems important therefore to begin by exploring the organization of affectional bonds that are developed from infancy, paramount among these being that of attachment as put forward by Bowlby (1961). This chapter will therefore explore the correlation of attachment with depressive phenomena in infancy with an emphasis on avoidant attachment.

Central concepts of attachment theory

Attachment theory

Drawing from the field of ethology, attachment theory regards the tendency to make intimate emotional bonds to particular individuals as a basic component of human nature (Bowlby, 1988). Attachment theory focuses on attachment behaviour that stems from an enduring bond between the infant and his mother. These early interpersonal experiences determine the quality of attachment the infant has with his mother (Ainsworth, Blehar, Waters & Wall, 1978). According to Bowlby (1958) by the age of one year most infants have formed a unique bond with their mothers and the breaking of this bond is painful. Attachment theory is essentially a spatial theory wherein proximity to the mother activates feelings of being loved and distance elicits feelings of anxiety, sadness or loneliness (Holmes, 1993). Proximity refers to both physical as well as psychological contact through attuned maternal care (Siegel, 1999). Horner (1984) comments that attachment is not merely the outcome of the association of the mother with the feeding and caretaking activities; rather, it is the build-up of day to day intense social interactions between the infant and mother. Thus children become attached whether their parents meet their physiological needs or not (Cassidy, 1999). Furthermore, Bowlby’s (1956) observations that infants become attached to abusive

mothers, indicates that the attachment system is not simply driven by pleasurable experiences.

Attachment behaviour

Attachment behaviours are a set of instinctive behaviours such as crying, smiling and vocalizing, that have a biological function, which, is to maintain proximity between mother and infant for the infant's protection (Bowlby, 1982). When distressed or threatened some of these behaviours are utilized and equilibrium is regained through the help of the mother (Sroufe, 2000). Siegel (1999) asserts that at an evolutionary level this behavioural system increases the infant's chances of survival while at the level of the mind attachment establishes an interpersonal relationship that enables the immature brain of the infant to utilize the mature brain of the mother for self regulation and maintaining equilibrium. Schore (2001) comments, that the mother through her emotionally sensitive responses to her infant's signals amplifies his positive emotional states and modulates his negative states. Thus Sroufe (1996) cites attachment as the dyadic regulation of emotion. Essentially, Bowlby (1982) points out that the infant and mother cannot be studied separately as there is a "dynamic equilibrium" (p.236) between them.

Secure base

The term secure base as introduced by Ainsworth (1982) refers to an ambience of safety, reassurance, encouragement and availability provided by an attachment figure which provides a springboard for curiosity and exploration in the infant. A secure base is essentially a jointly created state of mind in which the expectations of the child are congruent with the mother's ability to provide, which her behaviour demonstrates (Sorensen, 2004). This maternal ability is facilitated by her own internal responsive maternal object and capacity to identify with her child. Sorensen (2004) points out that this concept essentially provides a conceptual bridge between object relations and attachment theory.

Internal Working Model

Bowlby (1973) theorized that through repeated patterns of interactions children internalize experiences with the mother into mental representations of self and others referred to as internal working models, which are relatively stable and enduring and come to bear in all other relationships. Internal representations have been found to be

mental prototypes (representations) of early emotional experiences and are encoded as memories in the right hemisphere of the brain (Schoore, 1994). A securely attached child stores an internal working model of a loving, responsive, reliable mother and of a self that is worthy of love, while an insecurely attached child views the world and others as dangerous and unpredictable, to be treated with caution while experiencing himself as unworthy of love (Holmes, 1993).

Strange Situation Procedure

Through their Strange Situation Procedure Ainsworth and Wittig (1969) provided a means of exploring individual differences in attachment by observing the behavioural range of one year olds by inducing stress through momentary episodes of separation from and reunion with the mother. The quality of attachment was measured by the child's response to the mother upon reunion after the separation. Some of the categories of attachment styles that were classified were secure, insecure avoidant, insecure ambivalent (Ainsworth et al. 1978). More recently the category insecure disorganized has been added to this list. When used along with home observations the Strange Situation Procedure highlights the affective component that lies beneath attachment behaviours and defensive strategies such as avoidance of the mother (Trad, 1986). However, the Strange Situation Procedure is designed to measure only the child's behaviour while Hinde (1982) argues that within ongoing relationships, measures of behaviour are likely to reflect characteristics of both partners in the relationship. This view has led to research on exploration of the mother's developing tie to her infant such as that conducted by Feldman, Weller, Leckman, Kuint and Eidelman (1999) which was rooted on the hypothesis that mother's bond with her infant rests on similar conditions (to that of the infant) of proximity, separation and loss. The results supported this view emphasizing that the essence of attachment is the mother-infant relationship and not just characteristics inherent within the infant (Bridges, Connell & Belsky, 1988).

Neuroscience

Neuroscience (as elaborated in chapter three) has now corroborated early attachment findings. Schoore (2001) asserts that emotional communications of evolving attachment interactions have been found to directly impact the maturation of the infant's developing brain, which is dependent on experience.

Temperament

Pierrehumbert, Miljkovitch, Plancherel, Halfon and Ansermet (2000) argue that even though attachment security is said to depend on maternal sensitivity and responsiveness the manner in which an infant expresses his security or insecurity in the Strange Situation Procedure may partially be reflective of the infant's temperamental characteristics. Temperament can certainly impact the mother's attitude towards her infant which in turn may influence the quality of the infant's attachment. However, as stated in chapter four the mother's empathetic responsiveness and emotional maturity can aid her ability to cope with her infant's difficult temperament.

The following exploration of avoidant attachment has been undertaken in order to investigate links between this attachment style and depression in infancy.

Avoidant attachment

In the Strange Situation Procedure avoidantly attached one year olds were found to show few overt signs on separation and reunion continuing to play and behave as if their mother had not left or returned (Ainsworth et al., 1978). These infants are found to smile less and respond less positively to being physically held and more negatively to being put down and tend to cry for longer periods of time (Ainsworth et al., 1978, Karen, 1994). Main and Stadtman (1981) describe avoidance as defensive in character serving as an alternative to behavioural and emotional disorganisation. Emotional joining in such mother-infant dyads is limited which results in keeping both mother and infant relatively isolated (Siegel, 1999). Consequently the internal working model of children with this attachment style is that the parent cannot be relied on for meeting one's emotional needs, and as such it is necessary to rely on ones' own self which results in minimising proximity seeking behaviour in an effort to reduce anxiety (Holmes, 1993). However, later studies have found that these infants display a significant response in their nervous systems which was measured by changes in their heart rate (Spangler & Grossman, 1993). This demonstrates that the internal value placed on attachment has remained intact and intense (Siegel, 1999). Thus the child's external behaviour masks their internal response to separation from their mother. Potentially this minimising of proximity seeking behaviour can be misinterpreted by the mother for self-sufficiency or autonomy which may distance the mother even further and may contribute to a circular interactive pattern between mother and infant.

Maternal characteristics associated with avoidant attachment

Ainsworth and Bell (1974) comment that mothers who see things from their infant's point of view often tend to adopt child care practices which lead to harmonious interactions which result in their infants having more frustration tolerance and crying less as compared to infants whose behaviour made little or no difference in determining the manner in which they were cared for. Ainsworth and Bell (1979) also found that mothers of infants who were rated securely attached tended to be more sensitively responsive to their infant as compared to mothers of infants rated as avoidantly attached. Mothers of avoidant infants have been found to show an aversion to physical contact with their infant and express anger or threatening behaviour more often (Ainsworth & Bell, 1979; Lyons-Ruth, Connell, Zoll & Stahl, 1987). These mothers were also found to be restricted in their expression of affect conveying detachment or stiffness (Main & Stadtman, 1981). In addition, these mothers were found to lack sensitivity and displayed an interfering abrupt attitude in interactions with their infant (Lyons-Ruth et al., 1987). Parents' in avoidantly attached dyads have been found to display a significant lack in their ability to conceptualize the mind of the child (Fonagy et al. 1997). These parents have also been found to demonstrate low degrees of affect attunement and language expression as well as difficulty in relating to their infant at the infant's level of development (Crowell & Feldman 1988).

Bowlby (1982) states that the emphasis on the mother's contribution in attachment interaction is firstly due to the fact that the mother plays a far greater role than the infant in determining how much interaction takes place. Secondly the pattern of attachment that the child exhibits towards the mother is to a large extent the consequence of the pattern of mothering he receives. Nevertheless it is important to consider the mother's own history and attachment style in order to understand how this may impact on her interaction with her infant. Stern (1998) comments that the infant is a powerful memory inducer that elicits neural circuits going back to the mother's infancy or childhood, drawing out experiences that she has had with other maternal figures in her own life. In addition, studies also support the intergenerational transmission of attachment patterns whereby mothers' early attachment experiences and internal working models can affect their parenting behaviour which consequently affects their infants' attachment experiences (Levy & Orlans, 1998). Furthermore, Stern (1995) asserts that the most predictive pattern of attachment between mother and infant is not necessarily the kind of attachment experiences she had as a child (historical truth) but

rather it is the nature (coherence) of the narrative she conveys about her own mother as a mother. Moreover, Benedek (1959) suggests that the mother's inability to become totally preoccupied with her child may be related to her own early experience of loss which in turn can impair their developing attachment relationship. Thus the mother's own attachment style, subjective experience of how she was mothered and experiences of loss in her childhood can all impact her relationship with her infant.

Attachment and maternal depression

Maternal depression was not a variable addressed in most of the attachment studies cited above, however, some of the characteristics displayed by these mothers seem to strikingly correlate with those found in mothers with depression. Unavailability of depressed mothers, due to their lack of emotional involvement has been found to increase the risk of infants developing insecure avoidant attachment (Rosenblum, Mazet & Bénony, 1997).

Rationale for avoidant behaviour

Infants expecting rejection from their mother have been found to adapt to these suboptimal interactions by exhibiting avoidant behaviour towards her which include moving, looking away and failure to respond to her (Main & Stadtman, 1981). In terms of attachment theory if approaching the mother elicits rejection or provokes behaviour from the mother that is experienced as threatening, avoiding her may provide the infant an opportunity to achieve at least an acceptable level of proximity to her. Trad (1986) states that avoidance serves to ensure proximity by convincing the attachment figure that fight or flight²⁷ is unnecessary which might appease historically rejecting mothers sufficiently enough to tolerate some proximity with their infant. On the other hand avoidance may also allow infants to remain in contact by cutting off their mother's overwhelming stimuli (Trad, 1986). This view is corroborated by evidence of withdrawal in infants observed by infant development researchers discussed in chapter three. Thus avoidance paradoxically serves attachment. Bowlby (1982) comments that in the face of environmental threat the infant experiences painful conflict that can only be assuaged through contact with the attachment figure. However, when the attachment figure is the source of threat/rejection; contradictory impulses of withdrawal and approach are simultaneously activated in the infant. Ironically in the case of avoidant

²⁷ Biological response to stress.

attachment the very figure that embodies the threat is also the figure to be turned to for some semblance of protection which Main and Stadtman (1981) refer to as a “double bind” (p. 306).

Correlation between attachment and infant depression

Bowlby and Robertson’s (1952) observations of children who were separated from their parents during hospitalization found that children’s reactions tended to follow a three-stage pattern²⁸ which was protest, withdrawal and detachment. During the protest stage the child protests the separation with tears and actively seeks the parent. During the withdrawal stage the child stops searching for the parent. And in the detachment stage the child re-enters normal activities but when reunited with the parent he tends to be unresponsive. Significant in these observations was that the experience of loss was found to be unrelated to the need for food, warmth or even contact, all of which were regularly available to the child through the nursing staff (Trad, 1986). While these reactions were observed in children after physical separation from their parents similar stages may also be experienced by the infant due to psychological separation (in spite of the parent’s physical presence) either due to the mother’s depression or preoccupation with unresolved loss. The infant’s response of protest, withdrawal and detachment can therefore be applied to the understanding of symptomatology of depression in infancy (Guedeney, 2000). Moreover some of the characteristics seen in infants with avoidant attachment are saliently similar to withdrawal which is a symptom of depression in this age group.

Figure 1 illustrates the flow of interaction where in maternal rejection, aversion to physical contact and restricted expression of affect can lead to the infant’s withdrawal behaviour seen in avoidant attachment. In addition, withdrawal is also aroused due to physical and/or psychic separation from the mother. The infant’s withdrawal behaviour helps to maintain some proximity with the mother as well as blocks overwhelming stimuli. This in turn may enable the mother to tolerate an acceptable level of proximity to her infant. However, it may also potentially increase maternal rejection and distance as it may convince the mother of her infant’s (pseudo)independence, consequently amplifying her weakened belief in her mothering abilities. This demonstrates the circular nature of the mother-infant interactions that can contribute to avoidant attachment which can be linked to depression in infancy.

²⁸ Similar to the mourning process in adults.

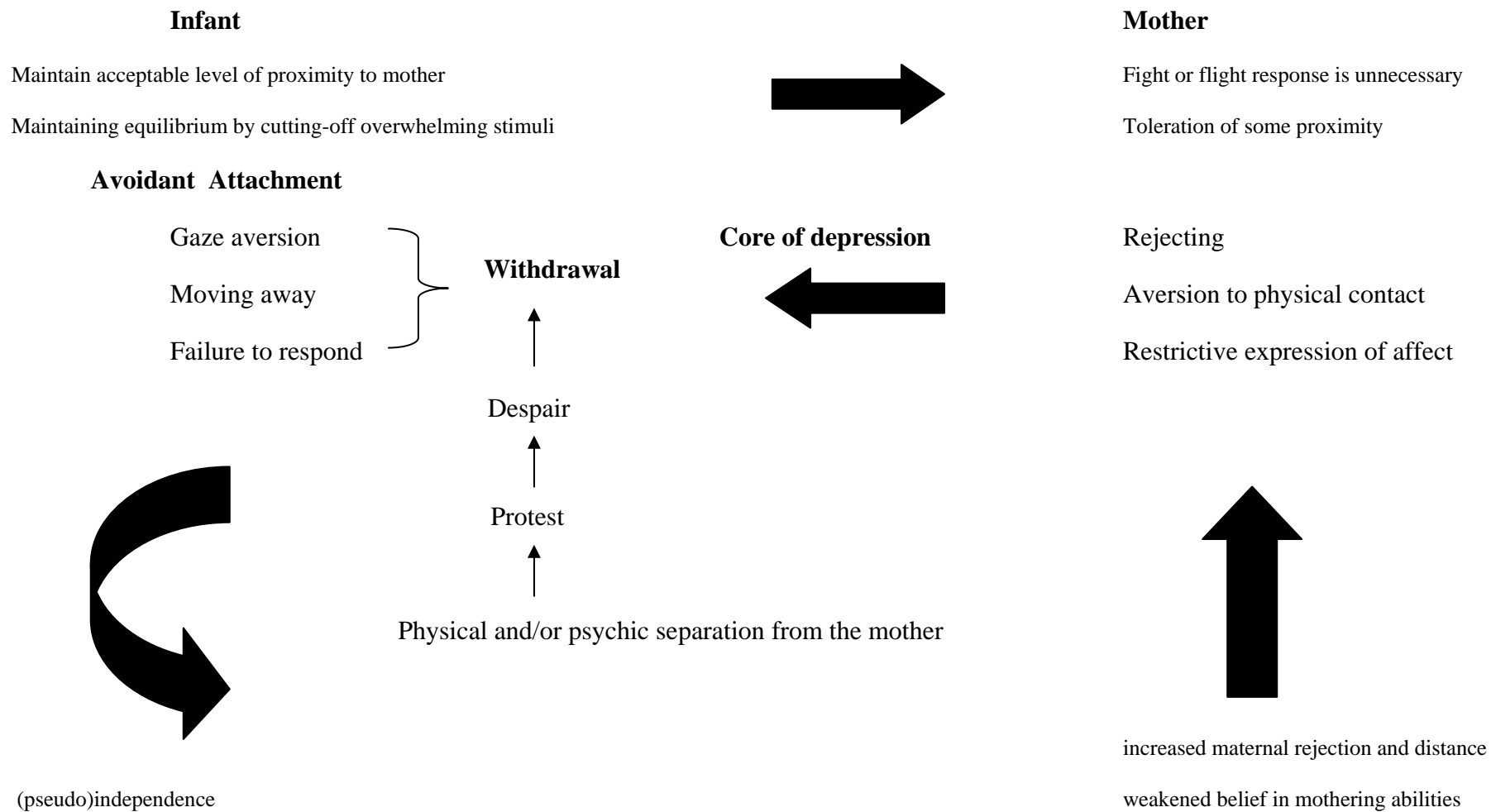


Figure 1: Correlation of attachment to depressive phenomena in infancy as linked to avoidant attachment

Critique

Attachment theory proves conclusively the primacy of relationships through a system of rigorous scientific studies. It provides a powerful focal lens through which depression in infancy can be understood. However, although attachment behaviours are universal, specific patterns may vary across cultures (Levy & Orlans, 1998). The role of culture is central to the mother's mental representations and interpretation of relationships (Carlson & Harwood, 2003). Culture may contribute to maternal rejection of the infant due to reasons such as preference for a male child often observed in Asian cultures. This in turn may contribute to avoidant attachment in some of these mothers with female infants. Mothering styles may also differ between various cultures such as directive styles adopted by Asian and South American cultures which may be viewed as harsh through an Anglo-American lens (Carlson & Harwood, 2003).

Conclusion

In conclusion attachment theory demonstrates that the infant is hardwired to seek proximity to a discriminated figure, usually the mother, for protection and affect regulation while the mother constitutes the secure base through her availability, sensitivity and responsiveness to her infant, which facilitates his growth and exploration of his environment. Thus attachment theory has provided a springboard for exploring impairments in the mother-infant relationship. This chapter has explored the manner in which avoidant behaviour indirectly serves the primary purpose of attachment (namely protection through proximity). Furthermore, salient links between avoidant attachment and depression in infancy were highlighted. The following chapter will synthesize the theoretical understanding of the mother-infant relationship and the data gathered in chapters four and five which will facilitate a deeper understanding of the phenomena of depression in infancy.

Chapter 6 - Discussion and Conclusion

Introduction

This dissertation was lead by the question: What is the influence of the mother-infant relationship on depression in infancy? In an attempt to answer this question chapter three explored psychodynamic theories related to infant development. Chapter four explored the impact of maternal depression on the infant. And chapter five sought the correlation between attachment and depression in infancy. After reviewing the available literature I argue that the mother-infant relationship has a profound impact on the infant and in some cases may lead to depression in infancy. By combining the various theories discussed in chapter three and the research findings in chapters four and five the following discussion will explore some possibilities of how the mother-infant relationship may contribute to depression in infancy.

Synthesis of theoretical and research data

As infants spend much of their time on average with their mothers and are more dependent on her caregiving during this phase as compared to any other phase of development, the impact of maternal depression can be significant. Research on maternal depression portrays the picture of a mother who lacks the ability to respond appropriately to her infant. Attachment studies incorporated in chapter five corroborate this view, demonstrating how maternal rejection and intrusive style of interaction can contribute to development of avoidant attachment. Furthermore, the common factor of withdrawal seen in avoidant attachment; psychic and/or physical separation from the mother and depression in infancy were highlighted.

Maladaptive interaction style

Studies explored in both chapters four and five highlight how maternal interaction style can have a negative impact on the infant. Thus it is the interaction style (which may be intergenerationally transmitted) with or without maternal depression that is critical although maternal depression can exacerbate this further. Figure 2 illustrates how maladaptive interaction style and/or depression in the mother's family of origin can lead to maternal depression and transmission of the similar interaction style in the mother (Lyons-Ruth, Lyubchik, Wolfe & Bronfman, 2002). This in turn may contribute to avoidant attachment and consequently depression in infancy may ensue.

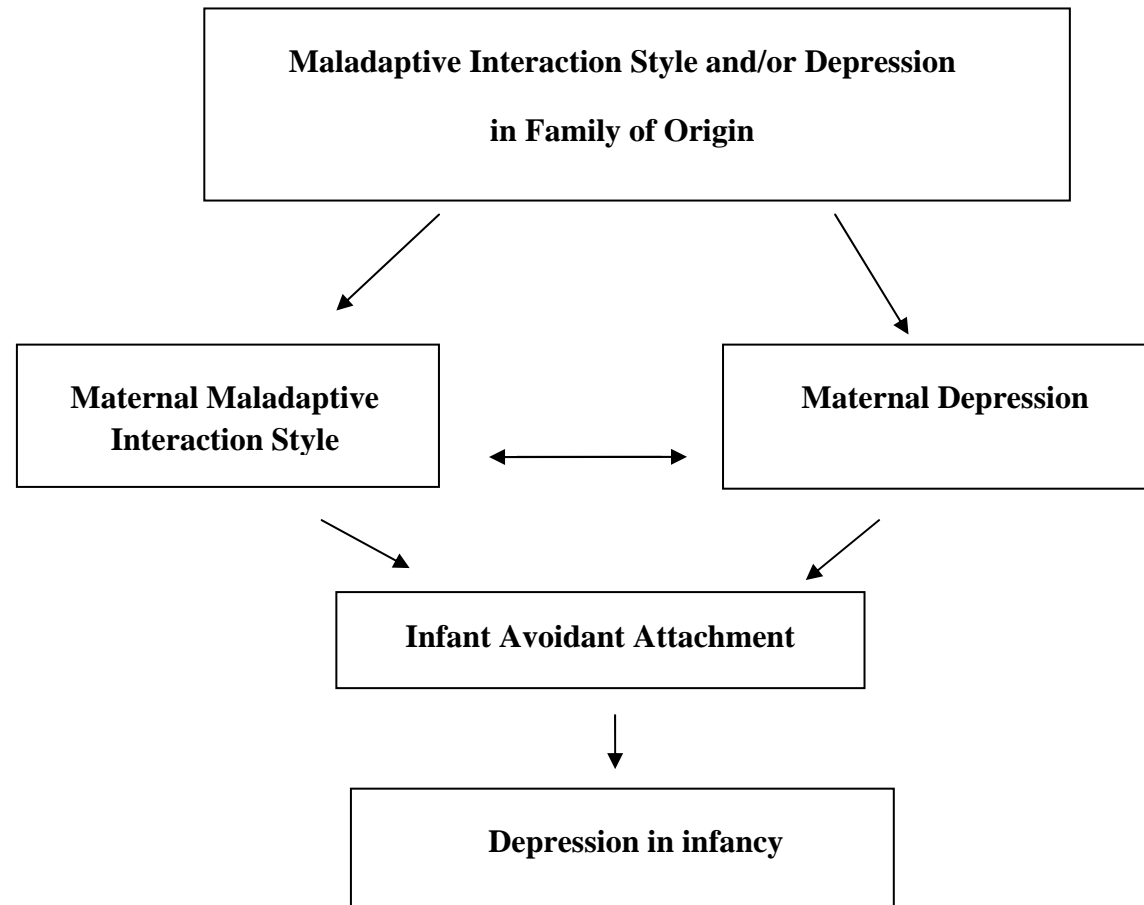


Figure 2: Intergenerational transmission of maladaptive interaction style and depression that may lead to depression in infancy

Maternal orientation

Benedek (1959) points out that parenthood reactivates parents' developmental conflicts that resonate with their child's developmental phase. Exposure to the infant may reopen old wounds²⁹ thus thawing what Winnicott fittingly calls, "freezing of the" environmental "failure situation" (Raphael-Leff, 1986; Winnicott, 1958, p. 281). This may be the source of depression for some mothers. Consequently Raphael-Leff (1986) postulates two types of maternal orientation namely *facilitator* – who adapts to her infant and *regulator* – who expects the infant to adapt to her. Mothers with depression are likely to fall under the latter category. The reactivation of the mother's old wounds coupled with the vast physical and emotional demands made on her by the early motherhood environment may result in her depression which in turn can have a negative impact on her interaction style imbuing it with psychological unavailability and detachment consequently this may kindle depression in her infant.

Folie à deux

Since the mother and infant share a close (physical) relationship, do the symptoms of depression that occur in the mother simultaneously occur in the infant? Is this a *folie à deux*? Anthony (1983) asserts that fusion with a depressed mother can induce a mood disturbance in the child. He describes his observation of the onset of depression in a mother and its impact on her 11 month old infant. As the mother's depression and withdrawal began the infant began to look anxious and made soft noises of distress, sleep rhythm was upset and the bottle was refused. The infant lay on its side with its limbs flexed and head bent, occasionally sucking its fingers. Around the third day the infant appeared distraught and clingy and after some time she seemed to have exhausted her resources and began to withdraw. Around the fifth day although the mother was put on antidepressants, no changes were observed in her interactions with her infant, the infant however, seemed less depressed and began to maneuver her rattle and a soft toy and partially responded to others. Around the tenth day the mother's medication seemed to be working and she began to interact more with her infant. A marked change was then observed in the infant, her appetite returned, sleep was restored and she responded to playful gestures. However, the infant had not completely

²⁹ of rejection and neglect in her own childhood.

regained her vitality and was clingier. The mother responded by “encapsulating” her infant but she complained that she was too demanding (Anthony, 1983, p. 11).

Similarly, Stern (1985) uses the term “affect contagion” to describe the biological tendency among humans to adopt emotional expressions of one another (p. 143). Studies have also found that infants display infectious crying upon hearing recordings of their own or other infants’ cries (Stern, 1985).

Thus through the means of a *folie à deux* depression may be transmitted from mother to infant. Furthermore, this concept can also be applied to negative mother-infant interactions irrespective of maternal depression. The mother’s withdrawn way of being in the world can be echoed by the infant consequently manifesting withdrawal in her infant. Thus since the mother and infant form part of a dyadic system the dysregulation in one part is transmitted to the other part of the dyad. Or in other words during a period of greatest dependency which constitutes this phase of development the infant mirrors, imitates and matches the mother’s internal and external states or ways of being thus creating a homeostasis between mother and infant through their mutual depression. Importantly the change in the infant that was simultaneously observed as maternal depression began to dissipate as described above demonstrates the malleability and resilience of the infant and the importance of early intervention.

Depressive constellation

Benedek (1956) on the other hand explains the infant’s response to the mother’s depression within a complex intergenerational matrix. She explains that when the infant’s needs are not met it can lead to frustration, with the infant projecting aggression onto the non-gratifying mother. Using Kleinian concepts Benedek (1956) goes on to articulate that the infant introjects these aggressive impulses leading to the ‘bad’ self and ‘bad’ mother becoming linked. From the mother’s viewpoint the frustrated infant reactivates her own preverbal memories of ambivalence and aggression towards her own mother when her needs were not met as an infant. This intensifies her aggressive behaviour toward her infant which results in her becoming not only the “bad mother but also the bad child again” (Benedek, 1956, p. 18). Similar to her own infancy when emotional equilibrium was acquired by gratification through her mother, her emotional balance can now only be re-established through her infant who contorts into “the

powerful good or bad mother” (Benedek, 1956, p. 18). Benedek (1956) asserts that this cycle of interaction between mother and infant may lead to clinical depression in the mother while simultaneously intensifying ambivalence of the “depressive constellation” in the infant which can predispose an infant to depression (p.18).

Ghosts in the nursery

The above description of the intergenerational transmission of depression also bears parallels to Fraiberg, Adelson and Shapiro’s (1975) concept of “ghosts in the nursery” where family scripts get repeated; leading to the mother’s inadvertent repetition of the tragedies of her own childhood as a result of which the infant is burdened by the mother’s unresolved past (p.387). Thus the infant may become a container for maternal projective identifications which may lead to psychic depletion resulting in the manifestation of depression in infancy.

Separation-individuation process and object constancy

The severity and duration of the mother’s depression, her soaring and dipping of moods and resultant physical and psychic separations from the infant can lead to the issues inherent in the separation-individuation phase being unresolved leading to the infant becoming vulnerable to stress and anxiety through identification with the mother’s mood. Furthermore, Mahler explains “if the infant’s signals are not heard because the mother does not have the capacity to react to them, the mother-infant circular reaction takes on a dangerously discordant rhythm” (Mahler, 1961, p. 340). This is supported by the research featured in chapter 4 which demonstrated that a mother’s ability to react to her infant’s signals is highly compromised due to her depression. While a depressed mother may be able to minister to her infants physiological needs her depression is likely to render her unable to satiate his complex human need for “affect hunger” (Levy cited in Mahler, 1961, p. 5). This in turn is likely to negatively impact the separation-individuation process in these infants, which under average conditions is dependent on the optimal availability of the mother.

For instance during the practicing sub-phase the child is learning to walk and create physical separateness from the mother with the child experiencing alternating moods of elation over accomplishments and low-keyedness or sadness resulting from the mother’s absence (Mahler et al.,1975). This variation in mood is a developmentally

appropriate adjunct of psychic autonomy (Bemesderfer & Cohler, 1983). Typically during this phase the infant would turn to his mother for refuelling through physical contact. For infants of depressed mothers their exploration, learning and responses to their environment would be taking place through the impenetrable veil of their mothers' depression without any provisions for refuelling or the resource of maternal auxiliary ego. We can speculate that when the mother suffers from depression the physical separateness from her during this stage can feel catastrophic to an already intrapsychically depleted infant with low-keyedness resulting as a pervasive way of being. This may then permeate through the subsequent phases of separation-individuation including rapprochement with its inherent struggles. In addition, each of these phases may also trigger further loss in a depressed mother.

The important aspect of the separation-individuation process is not only the achievement of psychic autonomy through the practice of individuation and the accompanied pride in these accomplishments, but also the internalization of the mother's more or less empathic responses to this process. Maternal unavailability (due to her depression) can impair the infant's exploration of his environment as he becomes preoccupied with her unavailability (Mahler et al. 1975). In such a case one can hypothesize that the infant is symbiotically fused with the mother's depression resulting in his mimicking of symptoms of maternal depression.

Typically as part of the acquisition of object constancy, the mental representation of the mother is internalized. This provides sustenance in the mother's physical absence (Mahler, 1967). In the case of a depressed mother her depression and depressed interactions are also internalized enhancing sadness in the infant due to his identification with his mother's feelings (Bemesderfer & Cohler, 1983). Consequently this can impair the acquisition of object constancy. If object constancy is not successfully achieved there can be distinct ambivalence, pseudo self-sufficiency, excessive over-identification and decreased spontaneity which results in the infant developing a self concept that is defective and unable to deal with inner tensions and this in turn reinforces feelings of unworthiness, depletion and even abandonment (Bemesderfer & Cohler, 1983). It is the development of this depleted self-concept that is an important feature in the development of the "nucleus of depression" during infancy (Bemesderfer & Cohler, 1983, p. 170). Furthermore, the lack of good enough

mothering caused by the mother's depression and/or negative interactive style can lead to the infant not internalizing the mother's function of regulating tension. In the absence of this maternal function and later the absence of the internalized part of the infant's own capacity for self soothing, he is compelled to rely on his own measures to achieve some semblance of inner regulation the most effective being pervasive withdrawal (Bemesderfer & Cohler, 1983).

When dependency needs are unmet and not permitted adequate expression and when the mother cannot be relied on for emotional consistency and affect regulation, autonomous functioning may prematurely result in the infant (Fischer, 1997). Thus depression in infancy can be viewed as an impairment in the separation-individuation process resulting from a premature separation (psychological distancing and disengagement from the mother) leading to over-individuation (a weakened intrapsychic autonomy without adequate object constancy). Fischer (1997) comments that over-individuation is often seen in adults who from a very early age have been left alone to negotiate affective interactions. This over-individuation may also be seen as 'being alone', without the development of the 'capacity to be alone' as described by Winnicott (1965a). Furthermore, over-individuation is also reminiscent of Winnicott's (1965b) concept of false self.

Object Loss

Bowlby made the connection between separation and anxiety but did not establish a linear relationship between separation or loss and depression (Guedeney, 2000). According to Bowlby (1980) depression occurs only when hope disappears i.e. the awareness of the irreparable character of the loss and this is closely linked to the concept of secure base. This brings up the question when does loss become represented in the infant's mind? Guedeney (2000) argues that if depression is the psychological consequence of the loss of an object i.e. the breaking of the relationship with an internalized object this would lead to the assumption that depression only exists when the object exists. It should be noted that object loss refers to the subjective experience of loss having occurred rather than an actual temporary or permanent loss (Bemesderfer & Cohler, 1983). With a psychoanalytic lens Guedeney (2000) argues that since the infant only gradually reacts to the mother as a whole object, depression in infancy is not likely to take place earlier than 3 months of age.

Conversely, Gergely (2000) asserts that from the beginning of life infants actively orient towards and process external stimuli displaying specific expectations and preferences for aspects of their physical and social world. For example newborns show a preference for the female voice (Friedlander, 1970); sensitivity to the shape of the human face (Fantz, 1963) and a capacity to imitate certain facial features such as tongue protrusion (Meltzoff & Moore, 1977). Thus responsivity to external stimuli exists from the beginning of life. This implies that an infant can be impacted by his external environment from the earliest days of life. Therefore, unlike Guedeney's (2000) postulations depression can occur in the infant earlier than 3 months.

A great deal of research also exists to support the impact of the environment on the developing foetus in utero. Verny and Kelly (1981) comment that synchrony and bonding begin during pregnancy with mother and foetus developing reciprocal sleep-activity cycles and styles of reactivity. They also found that severe maternal stress during pregnancy was associated with prematurity and infants who were hyperaroused. Kofman (2002) found that maternal anxiety raises cortisol levels in the mother, which on crossing the placenta begin to influence stress response and even brain growth in the foetus. Thus experiences in utero combined with repeated patterns of negative interactions with the mother can infuse the vulnerable infant with despair from the first weeks of life. And consequently his sequelae of emotional development can be derailed and vulnerability to depression can develop.

Dead mother

Green (1983) put forward the concept of the "dead mother" to describe "a mother who remains alive but who is, so to speak, psychically dead in the eyes of the young child in her care" (p.142). The concept refers to the image of a living mother who is brutally transformed following maternal depression, into a psychically distant figure. This in turn is connected with the ideas of object loss and depressive position (Kohon, 1999). The anxiety caused by the object loss produces a bleak, barren, state of "emptiness" (Green, 1983, p. 146). This leads to "massive decaathesis³⁰ of the maternal primary object, which leaves traces in the unconscious in the form of psychic holes" (Kohon, 1999, p. 3). This decaathesis is followed by the unconscious identification with

³⁰ Loosening of emotional ties.

the mother in order to establish a reunion leading to the child then mimicking the mother's depression, the aim being to "possess the object (who can no longer be had) by becoming not like it, but the object itself" (Green, 1983, p. 151). While Green postulates this development of depression in adults who were brought up by depressed mothers, it can also be applied to the naissance of depression in infancy.

Infant see, infant do – contributions of neuroscience and infant research

Neuroscience has demonstrated the true social nature of the brain through the discovery of mirror neurons. Mirror neurons demonstrate that the same brain region that controls action also supports perception (Jaffe, 2007). Studies have found that observing and imitating facial expressions activate the same regions in the brain. This illustrates the neural basis of maternal communication and emotional processing during preverbal infancy (Lenzi, et al., 2008). Even before the developments in neuroscience, infant research has shown that mother-infant reciprocal imitation facilitates dyadic interactive exchanges (Beebe & Lachmann, 1988). Thus it can be postulated that through these mirror neurons when the infant repeatedly observes his depressed mother, a similar depression is activated within him. Also through a reversal in the process of empathy and attunement the infant regulates his own self to match/imitate the internal state of the mother. In addition, research shows that neurons that do not receive environmental stimulation especially during the early phases of life, eventually get pruned or eliminated (Ahlander, 2002). Thus when the infant does not experience repeated patterns of emotional regulation through sensitive, attuned interaction with his mother, he is unable to develop this capacity himself. Furthermore, Karr-Morse and Wiley (1997) state that in the earliest years of life chronic over activation of neurochemical responses to stress in the central nervous system can result in lifelong states of either dissociation or hyperarousal.

Core of depression

When the mother is depressed, her infant's own experience is likely to be one of depression as the depression is likely to permeate their developing relationship with each other (Thomson Salo, 2001b). This can have an impact on the infant's interaction style which in turn can be more negative. When the mother is unable to soothe the infant's distress or help his depressed state, the unresolved depression lies at the core of the mother-infant interaction. This has the potential to consequently complicate the

developing relationship further leading to a spiral of negatives that could reinforce each other, where the infant is perceived as difficult, with the mother responding negatively, leading to infant becoming more anxious and depressed (Thomson Salo, 2001b).

Genetic predisposition and temperament

The fact of the depression in the mother suggests that her child will be both genetically and environmentally at risk or vulnerable to similar psychopathology (Anthony, 1974). As seen in chapter four some infants displayed depressed affect prior to interactions with their mother i.e. they were depressed from birth (Field et al., 1988). Also, Sameroff and Seifer (1983) suggest a genetic or temperamental origin for depressed behaviour in infancy. They report infants of depressed mothers have an extraordinarily high risk for developing depression.

A kaleidoscopic theoretical framework using object relations, attachment theory, infant research and neuroscience has been utilized to investigate the development of depression in infancy. Figure 3 illustrates this further by exploring the discrepancy between infant and maternal characteristics (Raphael-Leff, 1986) and the complex interplay of factors such as maternal depression, negative interactive style and her own unresolved loss or painful childhood history combined with the infant's temperament and biological predisposition that constitutes the basic fault which creates a lack of fit between mother and infant keeping them both isolated that can potentially lead to the development of depression in infancy. The lack of fit between mother and infant as theoretically conceptualized by Klein, Bion, Winnicott, Balint, Stern and attachment theory is incorporated in this illustration.

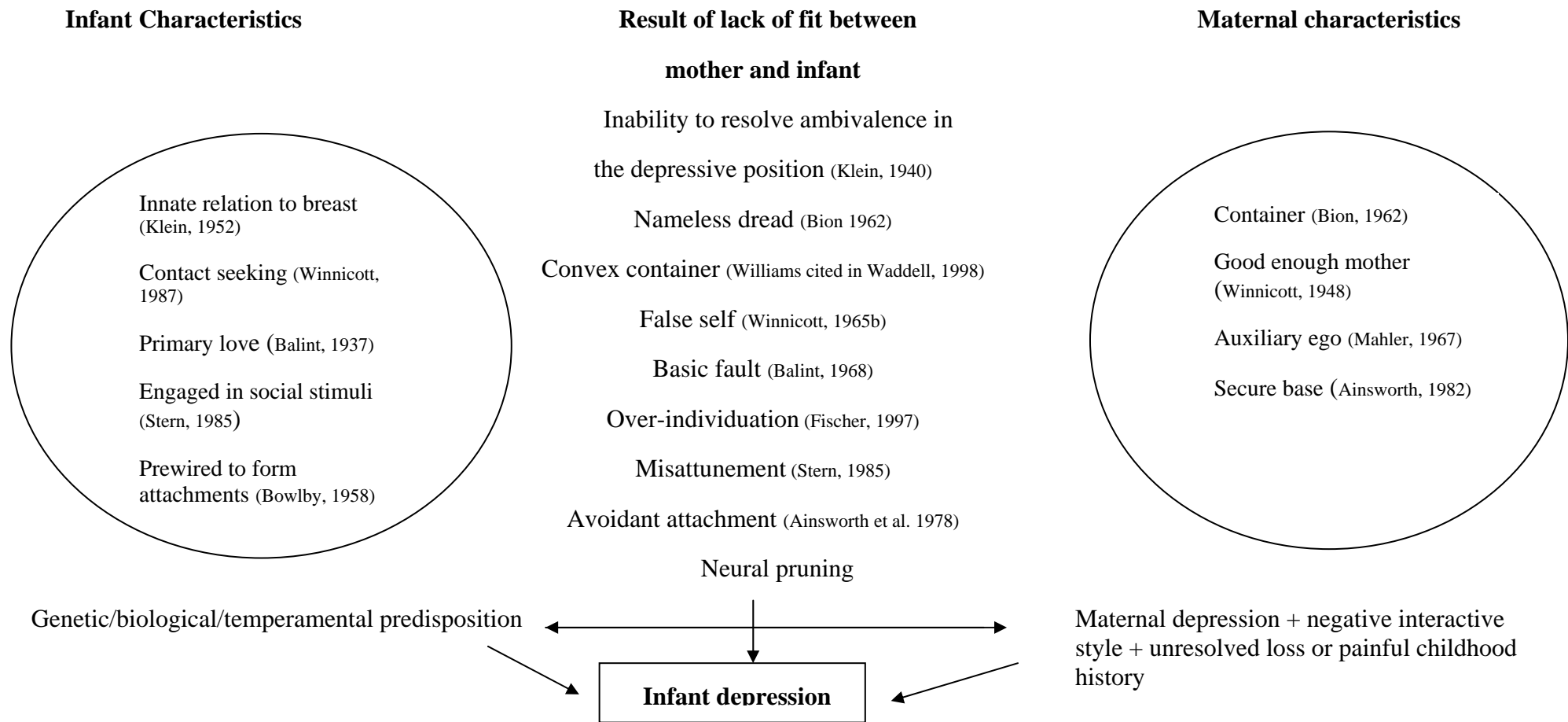


Figure 3: Theoretical conceptualization of the lack of fit between mother and infant that may lead to the development of depression in infancy

Diagnosis of depression in infancy

As expressed in chapter one there is very little data on infants diagnosed with depression. Although detection of depression in infancy is crucial, diagnosis/labelling of depression in infancy seems not as important. Primarily, the data gathered shows that there is a critical need for the deficient mother-infant relationship to be addressed at the earliest. Furthermore, while a diagnosis may help understand the infant's symptoms better, it could also potentially lower the mother's self esteem and increase doubts about her mothering capabilities even further. Depressed mothers need to be nurtured into their mothering role especially if they have not experienced good enough mothering themselves. Therefore these mothers need to be kept in mind in order to enable them to keep their infants in mind.

Significance of this dissertation for child psychotherapists

Since the first three years of life are crucial for the infant's development, early intervention in the case of mother-infant dyads experiencing difficult interactions as highlighted in chapters four and five become imperative. This research stresses the need for screening for depression during pregnancy and more screening for post natal depression. Although it can appear to be the concern of adult mental health, post natal depression comes under the domain of child psychotherapy because it impinges on the mother-infant relationship (Likierman, 2003). As can be seen in the previous chapters maternal depression can impact all areas of the infant's development especially his emotional growth. Consequently in cases where the mother is depressed or experiencing difficulties in her relationship with her infant or in cases where infants are displaying symptoms of depression there is a need for the mother-infant relationship to be treated. Mother-infant psychotherapy could be one of the possible interventions. This form of treatment offers a distinctive approach among the various psychological models of treatment³¹ of maternal depression as it addresses the mother-infant relationship, involves both mother and infant in sessions and makes use of countertransference which can contain deep anxieties in the family during a period when primitive emotions can be stirred (Likierman, 2003). In addition, when treatment has focused on ameliorating

³¹ Cognitive therapy, counselling, psychotherapy.

the relationship between mother and infant both at the level of mental representation of the relationship and the interactive strategies used, it was found that there was a positive outcome on infant symptoms and maternal depression (Cramer, 1993). Furthermore, the infant-led psychotherapy treatment called Wait Watch and Wonder³² which focuses on the interaction behaviours of the infant has also been found to be effective in improving mother-infant attachment security in dyads with maternal depression (Cohen, Lojkasek, Muir, Muir & Parker 2002). Interaction coaching techniques such as giving depressed mothers instructions to imitate their infants have also been found to be effective in improving interactions between depressed mothers and their infants (Field et al, 2004). Thus various techniques can be used to address the mother-infant relationship, which is of prime importance, rather than the treatment of only the infant or only the maternal symptoms of depressions.

This study also highlights the need for visibility of child psychotherapist within antenatal educational settings due to their ability to provide valuable psycho-education during this vital period. In addition, there is also need for visibility of child psychotherapist within the burgeoning field of infant mental health in New Zealand. However, most child psychotherapist would be working with children well past infancy. Here the importance of obtaining a detailed family and child developmental history is highlighted, which in turn can shed some light on the possibility of depression in infancy. Albeit this information would be provided by the child's caregiver with some possibility of certain areas being omitted. The importance of a detailed history lies in the fact that in later childhood and adolescence depression can be masked by other presentations such as Attention Deficit Hyperactivity disorder (ADHD) (Thomson Salo, 2001a; Emanuel, 2006). Older children of mothers depressed during infancy have been found to show poor self-control, aggression, poor peer relationships and difficulties in school (Embry & Dawson, 2002). Furthermore, Sroufe (2000) suggests that depression in infancy may be related to depression in adolescence. These factors constitute the essence of this dissertation which is the importance of keeping the infant in my child and adolescent clients in mind.

³² Is an infant led observational intervention in which, the mother is seen with the infant. The intervention is set and structured to optimise the infant's spontaneous activity and also to facilitate the mother's ability to observe her infant. It is based on the premise that recognition by a parent of the infant's developmental capacities fosters the development and elaboration of those capacities (Muir, Lojkasek & Cohen, 1999).

Strengths and weaknesses

Majority of the studies used in this dissertation, especially on maternal depression and its impact on the infant were quantitative. They provided empirical, measurable evidence on how the mother-infant relationship when impaired can negatively impact the infant. Furthermore, they provided rich fodder for investigating how this early relationship can impact the development of depression in infancy. However, the studies fail to fully capture the complexities of the mother-infant relationship which could have been better portrayed through the use of case studies which investigate phenomena within their real-life context (Yin, 1984). Moreover the incorporation of mother-infant observation as a research tool could have also enhanced this dissertation (M. Solomon, personal communication, November 9, 2008). The aim of this method is to directly investigate the earliest months of infant development and interaction with the mother by capturing the “unconscious mental processes” involved during this period (Rustin, 2006, p. 39). However, this method also brings with it issues of informed consent and ethics of participation in research that addresses conscious and unconscious processes (Hindle, & Klauber, 2006).

Limitations

This dissertation looked at the issue of depression in infancy through the lens of mother-infant relationships. The focus of this lens was further narrowed to impairment in this relationship brought about by maternal depression and the manifestation of avoidant attachment. However, other risk factors such as poverty, lack of education, chronic health problems, adolescent parenthood, birth complications, disabilities, minority status, immigration and domestic violence that can also impact the developing infant have not been included as they were beyond the scope of this dissertation. Comorbidity issues with maternal depression such as anxiety disorders and substance abuse have also not been included for the same reasons. Although the quality of caregiving irrespective of gender is of importance in this dissertation, research on depressed fathers could have further enhanced this discussion. However, there exists a paucity of research in this area. One of the reasons cited being, fathers are more difficult than mothers to recruit into research (Phares, 1996). Once again keeping in mind the parameters of this dissertation areas that could have further enhanced understanding of the topic such as disorganized attachment, learned helpless paradigm and infant

resilience had to be omitted. Theoretical inputs from Esther Bick and self psychology that could have also augmented this discussion had to be omitted, for similar reasons. Papers not published in English were also omitted, thus reflecting a Eurocentric bias.

The broad age range 0-3 years incorporated in this dissertation while pertinent to the understanding of depression in infancy at the same time tends to dilute the portrayal of depression in this age group. Since each of the three years of infancy is markedly different consequently the manifestation of depression during each period would be different. Furthermore, the omission of clinical data, case studies and vignettes (albeit they were hard to find) is another area of limitation. In addition, the interest in the topic of depression in infancy with its emphasis on the mother-infant relationship arises from my own personal history, values and professional advocacy for the needs of the child. This carries with it a subjective bias in the manner in which I have selected and interpreted the data to be used in this dissertation.

Future direction

The high rates of depression in New Zealand necessitates the need for more local research especially in the area of maternal depression as well as paternal depression and its impact on infants from a child psychotherapeutic point of view. Research on maternal depression that includes the impact of culture can further enhance the understanding of the topic. Especially with regard to deeply imbedded values regarding preference for a male child in some cultures that could potentially trigger off maternal depression and negative mother-infant interactions in case of the birth of a female child, which could contribute to depression in infancy. The impact of immigration on maternal depression and mother-infant interactions and infant depression is another area for further research.

Summary of theories

Diverse perspectives are needed to have a dynamic understanding of infant development. Therefore this dissertation has been enriched by the inclusion of object relations theory, infant observation research, neuroscience and attachment theory. Cumulatively these theories emphasize the importance of the mother's role in facilitating infant development. According to object relations theory, based on free-form observation and intuition, internalization of the object promotes autonomy while

according to attachment theory based on systematic observation, the mother provides a secure base for exploration, repeated experiences of which result in a secure internal working model (Schraff & Schraff, 2005). While object relations theory mainly focuses on the intrapsychic, attachment theory emphasizes the interpersonal and how this correlates to the intrapsychic. Thus both make links between the inner and outer world. Both perspectives illustrate the development of pathology due to serious disturbances in early experiences with the mother (Cassidy, 1998). These postulations have been further corroborated by infant observation research and neuroscience. In addition, at first glance the separation-individuation model (autonomy) and attachment model (dependency) of development seem to be in opposition. However, Blatt and Blass (1990) assert that they are intricately intertwined and are both required for the infant's development. Both theories demonstrate the paramount importance of the mother and her ongoing optimal relationship with her infant which in turn supports his development and navigation through each of these lines.

Conclusion

The key to understanding depression in infancy is not to equate the condition to depression in childhood, adolescence or adulthood. The mood disturbance in infant depression needs to be seen as a specific expression of affect rather than a disorder in the same manner as adult depression is considered a disorder (Bemesderfer & Cohler, 1983). In early stages of development when children are less competent in regulating their own emotions the mother plays a crucial role in facilitating emotional regulation. Research shows that maternal depression coupled with the early experience of object loss is a critical determinant of depression in infancy. The manner in which depressed behaviour is transmitted from mother to infant is not definitively clear. One possibility is that infants may be mimicking or mirroring their mother's behaviour or the infant's depressed behaviour may be a result of limited containment provided by the mother. Yet another possibility is the genetic transmission of depression. Even though the origins of this behaviour remain uncertain, research indicates that depressed maternal behaviour can be transmitted to her infant as early as the first few months of life. What is also clear is that the depressed mother's capacity to be a good enough mother is compromised. Furthermore, the earlier the exposure to depression and the length and severity of maternal depression the more potential for damage. In addition, development of depression in infancy is not limited to maternal depression alone; avoidant

attachment style that can develop irrespective of maternal depression can also contribute to the genesis of depression in infancy. This indicates that it is essentially the non-optimal quality of the mother-infant interaction that can have a devastating impact on the developing infant. Importantly, depressive symptoms in the infant can be subtle, discernment of which needs attention and sensitive attunement. Also since most parents enter the health care system seeking advice about their infant's physical health difficulties, the issues inherent in the development of non-organic failure to thrive with its possible links to depression in infancy need to be kept in mind. It has to be acknowledged however, that not all infants with mothers with depression will necessarily develop depression themselves. In many cases the other non-depressed adults in the infant's environment may buffer him from the full impact of maternal depression. However, in some mother infant dyads the lyrics that the mother brings (depression, negative interactive style, unresolved childhood issues and attachment style) combined with the lyrics the infant brings (genetic predisposition, temperament) result in the otherwise melodious mother-infant duet going off-key with the result being depression in infancy, which when undetected can have long lasting effects during subsequent phases of development.

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APPENDIX

Details of database search using word combinations

PsychINFO

Search Words	Combination word(s)	Results	Relevant articles
Infant\$ depression		20	4
Infant\$ withdrawal		7	0
Depression	Infant\$	363	10
Mother-infant\$ relationship	Impairment	5	0
Maternal depression	Infant\$ development	124	40
Attachment	Infant depression	10	5
Infant\$	Object loss	17	3

Psychoanalytic Electronic Publishing (PEP)

Search Words	Results	Relevant articles
Infant* depression	343	4
Infant* and object loss	20	2
Attachment and infant* withdrawal	15	2

Wiley Interscience (Medical Sciences and Psychology)

Search Words	Combination word(s)	Results	Relevant articles
Infant depression		2018	refined search
Depression	infancy	300	8
Mother-infant relationship	Impairment	95	5
Maternal depression	Child development	929	refined search
Attachment	Infant	100	12

Medline (Ebsco, Ovid and PubMed)

Search Words	Combination word(s)	Results	Relevant articles
Infant* depression		6	0
Depression	Infancy*	210	12
Maternal depression	Infant* development	17	0

ProQuest Dissertations and Theses

Search Words	Combination word(s)	Results	Relevant articles
Infant depression		0	-
Depression	infancy	45	0
Maternal depression	infant development	9	1

AUT Library Catalogue

Search Words	Results	Relevant articles
Infant depression	18	4
Mother-infant relationship	8	3
Maternal depression	15	3
Post-partum depression	44	5
Attachment and infant depression	4	2

Journals

Infant Mental Health Journal

Search Words	Results	Relevant articles
Infant depression	303	9
Mother-infant relationship	25	3
Maternal depression	261	8

Infant Observation

Search Words	Results	Relevant articles
Infant depression	33	2
Maternal depression	26	2
Attachment	49	3

Child development

Search Words	Results	Relevant articles
Infant depression	19	2
Mother-infant relationship	92	3
Maternal depression	20	5

Journal of Child Psychotherapy

Search Words	Results	Relevant articles
Infant depression	3	1
Maternal depression	2	1

Websites

World Association for Infant Mental Health (WAIMH)

Search Words	Results	Relevant articles
High risk infants	27	5
Maternal depression	10	3

Zero to Three

Search Words	Results	Relevant articles
Infant depression	74	5
Maternal depression	53	4