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**MOTHERS' REPRESENTATIONS OF THEIR CHILD IN A  
MATERNAL MENTAL HEALTH SETTING IN NEW ZEALAND.**

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## **Abstract**

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Attachment theory and research indicates that early close relationships impact on later socio-emotional functioning, and mothers' mental representations of their infants are thought to play an important mediating factor. Severe and long standing maternal mental health problems have found to interfere with sensitive caregiving. The present study examined the use of the Working Model of the Child Interview (WMCI) in the clinical setting of the Maternal Mental Health (MMH) system in New Zealand. Eight mothers, all of whom had either severe post-partum depression and/or other mental health issues, were interviewed. Qualitative differences in their narratives pointed to clinically relevant maternal distortions. Less than half of the transcripts were classified as balanced (balanced 37.5%, distorted 25%, disengaged 37.5%). Results supported previous research findings that maternal mental health issues interfered with the mothers' insight into how the child experienced the caregiving environment, placing children at greater risk for developing insecure attachments. Findings indicated that certain excerpts from the WMCI could be used by MMH workers to assess risk and protective factors to the infant-mother dyad and their implications for clinical interventions. The current research offers support for an integrated approach to maternal and infant mental health in a MMH setting.

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## Prologue

Attachment theorists suggest that working models of relationship, including working models of caregiving, develop within the context of the family and guide individuals' behaviour over time (Bowlby, 1980; Rutter, 1997). Empirical data support the association between child and adult attachment classifications, as well as caregiving representations and parenting behaviour (Bretherton & Munholland, 1999; Solomon & George, 1999). Less clear is the process through which these associations occur, and how early experiences of care are relevant to later socio-emotional and personality growth. Studies examining the role of maternal representations of their children explain some of the mechanisms thought to be involved in the intergenerational transmission of internal working models (Zeanah, Benoit, Hirshberg, Barton, & Regan, 1994), as they seem to reflect how caregivers and infants experience the dyadic relationship. Insight into caregiving perceptions can alert clinicians to misconceptions and unmet developmental needs of the children.

A number of studies have shown an association between maternal mental health, the quality of caregiving, and risk factors to subsequent infant cognitive and emotional development (Espinosa, Beckwith, Howard, Tyler, & Swanson, 2001; Oates, 1997; Ward, Lee, & Lipper, 2000). A significantly higher level of insecure attachment has been found among infants of depressed mothers compared with mothers from a non-clinical population (Robinson, 2002; Teti, Gelfand, Messinger, & Isabella, 1995), and maternal depression has been linked to qualitative aspects of parenting, since severe and

prolonged depressive symptoms have found to interfere with the mother's ability to interpret and become sensitive to her infant's signals (Murray & Cooper, 1997).

Exact data on the prevalence of post-partum depression (PPD) in New Zealand are unavailable because this disorder often goes undiagnosed, but it is estimated that it affects between 10 and 15 per cent of mothers within the first year after birth (Courtney, 2004). The Maternal Mental Health (MMH) system in New Zealand primarily targets mothers who have either a history of mental illness or severe and prolonged PPD. While interventions are usually directed at the mother's mental health issues, MMH workers rarely assess the parent-infant interactions or mothers' perceptions of themselves as caregivers and how they view their infants and their development. Because an early identification and prevention of risk to infant development can reduce potential negative outcomes associated with aberrant parent-child interactions, it seems critical that MMH workers focus on aspects of individual areas of strengths and weaknesses within the parent-child dyad while providing support for the caregiver (Atwool, 2000; Graham, White, Clarke, & Adams, 2001; Nightingale, 2001).

The research reported in this thesis evolved from my specific interest in the integration of attachment theory into the clinical work with parents and children. It is the first study is the first to examine the use of the Working Model of the Child Interview (WMCI) (Zeanah, Benoit, Barton, & Hirshberg, 1996) with a clinical population in New Zealand. The key aim of my study was to investigate the applicability of the WMCI in a New Zealand MMH setting.

## **Attachment Theory and Research**

Bowlby (1988) proposed that everyone has the innate biological ability to parent, but that personal history and experiences shape the particular form it takes. His theory has promoted the theoretical understanding that early interpersonal experiences are translated into abstract and generalised knowledge structures that individuals use to predict and guide interactive behaviour. An overview of theory, research, and literature regarding attachment is necessary to sufficiently understand how the adult caregiving system evolves, and how parents form representations of their infants and themselves as caregivers.

### **Representations of Attachment Experiences**

Attachment is a reciprocal relationship that develops gradually through stages during the first year and is mediated by the quality of adult-child interactions. While the goal of attachment behaviour in the child is to seek protection and maintain proximity to the attachment figure, the caregiving role is to facilitate the child's development within a safe environment. How parents fulfil this role, as Bowlby suggested, is shaped by their developmental history and their own attachment experiences. Through a history of child-caregiver encounters infants come to expect particular caregiving responses to signs of distress or the need for closeness. This fosters particular patterns of overt interpersonal behaviour, emotions, and perceptions about self and others. By about the age of three, these patterns of dyadic behaviour are internalised to form mental

representations or 'internal working models' (IWMs) of self and relationships (Bowlby, 1980). Over time these models are incorporated into the personality structure of the individual and become resistant to change, since new experiences are accommodated by existing models even if they are inconsistent with these. According to both social-cognitive and attachment theory, cognitive-emotional schemas derive from implicit learning experiences and provide information processing rules - including defensive processes and biases in recall - to organise and regulate how information related to attachment is stored and what is available to consciousness or blocked out (Lay, Waters, Posada, & Ridgeway, 1995; van IJzendoorn, 1995; Weinfield, Sroufe, Egeland, & Carlson, 1999). In this way IWMs mediate intrapersonal aspects of emotional and cognitive development (i.e., access to one's feelings and memories and the appraisal of social situations) as well as interpersonal communication processes throughout life.

Even though differences in attachment are thought to influence subsequent development and later outcomes in terms of personality and the ability to cope with stressful life events, changes in pattern of adaptation always remain possible. In childhood, IWMs may be changed through different and more positive experiences with the caregiver or other important adults, and in adulthood these models can be revised through reflective processes and the formation of new attachments (Bretherton & Munholland, 1999).

In summary, attachment theorists agree that IWMs are derived from early attachment experiences with the primary caregiver(s). Secondly, they consist of mental structures (schemas, rules, and scripts) that are generalised into an organizing perspective of

interactive experiences and affect. Thirdly, IWMs involve defensive processes that influence general and specific memories and the personal narrative of attachment related experiences. Fourthly, even though internal representations are thought to become increasingly stable, change can occur through the influence of new attachment experiences and the development of a self-reflective capacity.

### **The Caregiving System**

According to attachment theory, the infant-caregiver relationship consists of more than mere observable interactions. These relationships also include the subjective experience of infant and caregiver, which, on a representational level, organises the caregiver's behaviour and the infant's attachment strategies. This model therefore predicts continuity and the intergenerational transmission of relationships (if living conditions do not change), as well as the degree of sensitivity and responsiveness with which parents react to infant attachment signals. While the caregiving system is distinct from the attachment system, it is thought to be moderated by the caregiver's own working model of attachment (Bowlby, 1969/1982; Solomon & George, 1999; Main, Kaplan, & Cassidy, 1985). How individuals see themselves as caregivers will depend on core-beliefs about self, and caregiving experiences (even pregnancy itself) can trigger off "old psychological conflicts" (Huth-Bocks, Levendosky, Theran, & Bogat, 2004a, p. 81). Parents' capacity to have insight into their role as caregivers and into their children's personality is thought to depend on differences in information processing (including defensive processes), which in turn is linked with the ability to access and



integrate their own attachment experiences (Main et al., 1985; Zeanah, Benoit, Barton, Regan, Hirshberg, & Lipsitt, 1993). This helps parents to distinguish current caregiving demands from their past experiences. From a clinical perspective, the subjective experience of the relationship is as important in the assessment and treatment of mother and infant dyads as the behavioural component (Stern-Bruschweiler & Stern, 1989).

Research on maternal perceptions show that both mental illness (Wood, Hargreaves, & Marks, 2004) and a stressful environmental context, such as domestic violence and lack of social support (Huth-Bocks et al., 2004a) affect mothers' representations of the child and self as a parent before and after the birth of their child. Mothers who participated in these studies were more likely to reveal distorted or disengaged representations compared to the normative data obtained from non-clinical samples. The findings of these studies further indicate that these representations are associated with risk to infant mental health.

Caregiving representations though, like working models of attachment, need to be viewed as developing since they are open to changes. Interactions with the child constantly challenge caregiving representations, and parental awareness and confidence has been found to develop with experience over time, especially if support from parents or a spouse is available (Goldberg, 2000; Newberger & White, 1990) or intervening change occurs in the quality of parental care (Thompson, 2000).

## **Measures of Attachment and Caregiving Representations**

A structured observation schedule, known as the Strange Situation (SS) test, was devised by Ainsworth (1967) to measure individual differences in infant attachment behaviours in laboratory or other controlled settings. She identified three distinct behavioural patterns of how children (12-18 month of age) use the attachment figure as a 'secure base' from which to gain reassurance when exploring their surroundings and how they cope during separations and at reunion. The three main groups are: secure, insecure-avoidant, and insecure-ambivalent. Later a fourth attachment category was identified by Main and Solomon (1986), the insecure-disorganised/disoriented.

Main and Solomon (1986) created a discourse-centred research instrument called the Adult Attachment Interview (AAI). Its emphasis is on how adults organize and evaluate childhood attachment experiences from their current perspective, and scoring of the AAI focuses on the coherency of discourse. In attachment research a coherent discourse is one that follows Grice's (1975) four maxims of quality (statements are supported), quantity (succinct), relation (relevant to topic), and manner (clarity). The speaker should be able to integrate emotional laden or traumatic experiences into the discourse without the loss of clarity (Main et al., 1985). The four patterns of discourse in the AAI – autonomous, dismissing, preoccupied, and unresolved/disorganised correspond to the four patterns of infant attachment and predict the organisation that an infant will have with the caregiver (Benoit & Parker, 1994; Bretherton & Munholland, 1999).

Table1

*Overview: Measures of Attachment and Caregiving Behaviors/Representations*

Strange Situation (SS)	<u>secure</u> active exploration - seek physical contact when distressed; easily comforted on reunion	<u>avoidant</u> adequate exploration; active avoidance of parent on reunion; fails to cry on separation; these children often look independent	<u>resistant/ambivalent</u> preoccupation with caregiver interferes with explorative behaviour; ambivalent (angry/ passive) reunion behavior; cannot easily be comforted on reunion	<u>disorganised/disorientated</u> incoherent/chaotic behavior in presence of parent (e.g., freezing with trancelike expression; approaches parent sideways, eyes averted)
Adult Attachment Interview (AAI)	<u>secure/autonomous</u> clear and coherent discourse; offer specific support for descriptions; objective evaluation and integration of attachment experiences	<u>dismissing</u> dismissive of attachment experiences; generalised representations tend to be brief	<u>preoccupied</u> not coherent, preoccupation with past experiences; contradicting specific memories; extremely long transcripts	<u>unresolved/disorganised</u> incoherent, irrational and confused narratives; lack of resolution of traumatic events indicated by lapses in reasoning during interview
Working Model of the Child Interview (WMCI)	<u>balanced</u> representations are coherent, include both negative and positive characteristics of infant; open to changing developmental needs; see children as individuals	<u>disengaged</u> downplay child's need for closeness and impact they have as parent on child; do not seem to know child as individual; unelaborated descriptions	<u>distorted</u> unrealistic expectations of child; contradictory descriptions; high emotional tone (negative or positive); confused, overwhelmed by child or other concerns; possible role-reversal	
corresponding caregiving behavior	interact in a responsive and predictable way with child; non-intrusive; adjust caregiving behavior in developmentally appropriate manner	encourage independence; react in strict disciplinary way	over-involved and anxious; insensitive to child's cues and need for autonomy	Inconsistent and frightened or frightening caregiving behavior

Note: Descriptions of SS behavior is summarized from Ainsworth (et al., 1978); Main (et al., 1985, 1986). Descriptions of AAI representations are summarized from George (1996); Main (et al., 1985). Descriptions of WMCI representations are summarized from Benoit (et al., 1997); Oppenheim (et al., 2002); Zeanah (et al., 1995). Caregiving descriptions have been summarized from Belsky (et al., 1995); Solomon (et al., 1996, 1999); Hesse (1999).

A third important assessment device, the Working Model of the Child Interview (WMCI) was designed by Zeanah and colleagues (1996) to assess parents' perceptions and subjective experience of their children and to identify particular problems in the dyadic relationship. The three main classifications proposed are: balanced, disengaged, and distorted. These correspond to the three AAI classifications of secure, dismissing, and preoccupied and the SS classifications of secure, avoidant, and resistant (see Table 1).

Previous studies with the WMCI (Benoit, Zeanah, Parker, Nicholson, & Coolbear, 1997; Zeanah et al., 1994) have found a significant association between WMCI classifications (even before birth) and infant attachment behaviour at one year. These findings are important, since the parents' state of mind with respect to attachment behaviour is thought to direct as well as to perpetuate parenting behaviours (Brisch, 2004; Slade, Belsky, Aber, & Phelps, 1999; Pederson, Gleason, Moran, & Bento, 1998). This raises questions about how parents transmit their mental representations of attachment to their children, and how that affects individual differences in attachment security and later development.

### **Transmission of Attachment Patterns**

Attachment theorists have investigated how early experiences affect social and personality development, and what central features of parenting are influential in this process. For many years maternal sensitivity – a mother's ability to "see things from her

baby's point of view" (Ainsworth, Bell, & Stayton, 1971, p. 114) - has been considered the most important factor in the transmission of attachment. The effect size for the relation between AAI classifications and sensitive responsiveness has found to be only moderate however, mainly because the sensitivity construct cannot be uniformly operationalised (Isabella & Belsky 1991).

Oppenheim and Koren-Karie (2002) used the construct of 'insightfulness' to describes a wide range of maternal behaviour, including the caregiver's ability to interpret the child's actions as goal-directed and to use the infant's perspective and developmental needs as a point of reference in dyadic interactions. This perspective is consistent with that of Fonagy (2003), who describes the capacity for an interpersonal interpretation, which overlaps with the concept of a 'theory of mind', as the key determinant of secure attachment. Main (1991) believed that a mother who could access and openly acknowledge attachment-relevant information and memories was also able to recognise and respond to her child's changing attachment needs. A sensitive parent can support the child in increasing autonomy and set age-appropriate limits (Lieberman, 2004).

Taken together, attachment theory and research outcomes support the notion that a mother's representation of her child is related to own attachment experiences, her caregiving behaviour and to the quality of attachment formed with the child. Attachment is not synonymous with the total relationship between child and caregiver, and while it is likely that early experiences of care become relevant to later socio-emotional development, distal factors including maternal mental health and social support influence the aetiology and maintenance of psychosocial problems.

## **Risk Factors to Infant Development**

Normal or healthy child development is characterised by the adaptation and integration of stage-dependent learning experiences in a predictable caregiving environment. Pathological development, in contrast, may be conceived as a lack of exposure to or integration of social, emotional, and cognitive functioning important for specific developmental stages (Perry, 2004; Siegel, 2001). The prediction that early disturbances in functioning may cause the subsequent emergence of larger clinical problems later in life is not unique to attachment theory. What attachment theory contributes is the emphasis on how the earliest symptoms of deviations in the parent-infant relationship modify the infant's socio-emotional development. The infant-caregiver relationship and mothers' perceptions and behaviour allow health care workers to identify and gain some understanding of early attachment difficulties. Assessment and treatment in the maternal mental health sector ideally should incorporate principles of infant mental health with a shift toward prevention and early intervention.

## **Mechanisms of Transmission of Risk**

Insecure attachment is associated with a higher risk of social and emotional malfunctioning if adverse life circumstances do not change (Eagle, 1995; Greenberg & Speltz, 1988; Lyons-Ruth, Connell, & Grunebaum, 1990; Rutter, 1997). This means that even though individual differences in the security of attachment are not necessarily deterministic of later development, pervasive patterns of maternal insensitivity and

family difficulties – especially unstable caregiving-relationships - lead to insecure attachments and need to be considered risk factors for later socio-affective functioning. Following the diathesis-stress model, biological and environmental factors may lead to an increase in maternal stress, lower perceived parenting efficacy, and poorer quality of mother-child interactions. Some of the proposed mechanisms which may mediate and moderate insecure attachment and the transmission of risk include high-stress and poverty conditions, social support (this will be discussed in more detail later), marital problems (Herwig, Wirtz, & Bengel, 2004), parenting strategies, and maternal mental health (Adam, Gunnar, & Tanaka, 2004; Greenberg, 1999; Thompson, 2000). Differences in temperament certainly play a role in the mother-child interaction, but may be counteracted by maternal sensitivity (Brisch, 2004).

Research on the relationship between type of adult attachment and adult clinical status supports the theoretical notion that the caregivers of children who later develop clinical problems are more likely to have insecure representations of their own attachment experiences (van IJzendoorn & Bakermans-Kranenburg, 1996), even though no evidence has been found that avoidant and resistant attachment are linked with particular later disorders (Goldberg, 2000). What has been established though is that insecure attachment has found to be relatively frequent in families with affective disorders, and that compared to children classified as secure, insecure children perform more poorly on socio-cognitive skills (Greig & Howe, 2001). Severe and chronic maternal impairment during the child's early years has been associated with disturbed caregiving and a high risk for disorganised attachment (Lyons-Ruth & Block, 1996;

Lyons-Ruth & Jacobvitz, 1999; Radke-Yarrow, McCann, DeMulder, Martinez, Belmont, & Richardson, 1995; Teti et al., 1995).

When assessing mother-infant dyads 'at risk', protective factors, such as a good relationship with a second attachment figure, like a father or grandparent (Thompson, 2000), and/or an easy temperament also have to be considered influential on the children's response to maternal depression (Lieberman, 2004). Additionally it must be remembered that even though the task of parenting is particularly challenging when faced with the effects of mental illness on motivation and energy levels, most mothers regard their role as caregivers as essential and are determined to look after their children as best as they can. Research suggests that while mothers with a serious mental illness are not necessarily less affectionate or caring with their children, they are less engaged in "linked verbal interchanges" and are not "in tune with their child's current needs" (Oyserman, Mowbray, Meares, & Firminger, 2000, p. 304). Several studies (Murray, Fiori-Cowley, Hooper, & Cooper, 1996; Murray & Cooper, 1997; Thompson, 2000) indicate that the quality of shared discourse - how mothers interact and communicate with their children - has a greater impact over time on infant-mother attachment and later developmental outcomes than maternal depression or infant irritability. Neurobiological studies (Damasio, 1999; Schore, 1996, 2000, 2001; Siegel, 2001) have highlighted that adaptive infant mental health is based on regulated interactions with a familiar and predictable caregiver who is able to regulate her own as well as the child's (especially negative) affect. According to Perry (2004), relational poverty or the deprivation of critical experiences during early brain development can result in 'splinter



neglect' which the author describes as the "deficit in any of the key capacities mediated by the brain" (p. 3). It is a neglect that is much harder to detect than more obvious and global neglect and abuse, but can lead to increased vulnerability to the effects of stressors later in life and a risk for the development of mental disorders (Heim & Nemeroff, 2001).

### **Maternal Affective Disorders**

The most researched mental disorder and its consequences to maternal behaviour and infant development is post partum depression. It seems that depression is associated with impairments in parenting through several different mechanisms. First, the mothers' negative affect may be transmitted directly to their infants, since their interactive behaviour has found to be characterised by higher rates of negative interactions, such as hostile and/or intrusive behaviour, or by lack of physical contact and disengagement (Field, Healy, Goldstein, & Guthertz, 1990; Murray et al., 1996). Second, maternal depression has been found to diminish contingent responsiveness or sensitivity (Field et al., 1990; Lyons-Ruth et al., 1990; Teti & Gelfand, 1991) and to impair caregiving competency (Teti & Gelfand, 1997), in particular disciplinary functioning (Radke-Yarrow et al., 1995; Downey & Coyne, 1990; Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2004). Third, associated conditions like marital discord and other environmental and biological risk factors increase difficulties in caregiving, probably as part of a two-way process (Goodman, Brogan, Lynch, & Fielding, 1993).

Despite inconsistencies across measures and samples and methodological differences in studies on the effect of maternal depression on children (Atkinson, Paglia, Coolbear, Niccols, Parker, & Gunger, 2000; Coyne et al., 1990; Rutter, 1990), a meta-analytic review on maternal depression and maternal behaviour by Lovejoy and colleagues (2000) indicated that effects for negative maternal behaviour is closely related to the timing of the depression. The association between depression and parenting was strongest among mothers of very young children. This reflects the dependency of infants and very young children on their caretakers to initiate interaction and to coordinate with the child's emotional state. Mothers who suffer distinct episodes of depression also often experience "residual dysfunction between episodes" (Atkinson et al., 2000, p. 1034), so that children are not only exposed to parental depression over substantial periods of time, but also to a history of inconsistent caregiving behaviour (Radke-Yarrow et al., 1995). Similarly, reoccurring episodes of mental illness are likely to undermine the mother's sense of competence, and non-optimal parenting may emerge as the child moves through different developmental stages which require the adjustment of parenting strategies (Lyons-Ruth et al., 1990; Oyserman et al., 2000).

Severity of impairment has also been shown to impact on the effect size of maternal depression's influence on child attachment (Atkinson et al., 2000). Mothers of clinical samples, diagnosed with major unipolar or bipolar depression, found it difficult to regulate their own and their children's negative affect and to interpret interactive signals accurately (Radke-Yarrow, 1995). Depressive psychological symptoms often influence the parent's cognitive functioning and energy levels, which may also be compromised

by the use of medication. Additionally, the responsibility and stress related to caregiving has been found to increase the risk of reoccurrence of serious psychological symptoms, such as anxiety and depression, in mothers with a history of affective disorders (Oyserman et al., 2000).

Parenting difficulties associated with a depressive disorder may not be specific to depression alone. Women with high levels of anxiety, stress, or chronic interpersonal problems (family discord) may show similar parenting problems, even in the absence of major depressive symptoms. Other Axis-I disorders, such as postpartum psychosis, bipolar disorder, schizophrenia, post-traumatic stress disorder (often associated with maternal childhood experiences of physical or sexual abuse), and Axis-II disorders (e. g., borderline personality disorder) have also been found to lead to disturbed caregiving and to pose a risk to secure infant attachment and healthy development (Downey & Coyne, 1990; Espinosa et al., 2001; Fonagy, Leigh, Steele, Steele, Kennedy, Mattoon, Target, & Gerber, 1996; Hipwell & Kumar, 1997; Oyserman et al., 2000).

Research outcomes clearly identify maternal depression as a risk factor for psychological disturbances in children, yet it is less apparent if this risk derives from the depression or other psychosocial adversities. Longitudinal studies demonstrate that “the total *number* of risk conditions affecting an infant may be more predictive of various outcomes in later life than exposure to any specific *type* of risk factor” (Zeanah, Boris, & Larrieu, 1997, p. 168), and it has been widely accepted that effects of maternal depression are mediated by adverse conditions, including economic stress (Balbernie,

2002) and the perception of limited social support (Atkinson et al., 2000; Goodman & Gotlib, 1999).

To summarise, the occurrence of one or more of the discussed mechanisms for the transmission of risk to attachment security is associated with vulnerabilities in cognitive, affective, and interpersonal or social domains of functioning. These will, like risk factors, interact and affect one another. Severity and timing of postpartum depression and other maternal affective disorders moderate the effects on the impact on children's functioning, while parental behaviour and broader family processes can be seen as mediating factors between maternal mental disorder and infant development.

### **Perceived Social Support**

Research supports the strong association among pre-natal and post-partum depression, stressful life events, and lack of social support (Huth-Bocks et al., 2004a; Priel & Besser, 2002). The transition to motherhood can be a particular time of increased stress and anxiety, and social support has been found to influence the mother's perception of self as a caregiver as well as her interactions with the child (Atkinson et al., 2000). The availability of social support within and outside the family can also act as a protective factor for children at risk. A study by McCurdy (2005) showed that an increase in informal support from the husband/partner and the provision of formal support through home visiting was able to change caregiving behaviour as well as more embedded beliefs around parenting relationships.

While research in support of the positive influence of social support on child attachment security seems convincing, Nakagawa, Teti, and Lamb (1992) found a negative correlation between these two constructs. Variations in measurement, participants (low-risk vs. high-risk population, cultural background, as well as age of infants), and timing of measurement make it difficult to compare findings and form conclusions (Berlin & Cassidy, 1999).

Changes in level of functioning as well as past experiences have been found to influence perception and availability of social support. Most research therefore distinguishes between qualitative and quantitative dimensions of social support and includes both subjective and objective perceptions, since the perception of social support is not always congruent with the actual support provided. Some support might be experienced as patronising and disempowering and has an adverse effect on health outcomes. In a study on maternal characteristics, social support, and infant-mother attachment, Huth-Bocks and colleagues (2004a) found that maternal attachment experiences were not only significantly related to representations of caregiving, but also to how mothers accessed and used social support. Consistent with attachment theory, caregivers tend to generalise their early interpersonal experiences of support to new relationships. Additionally, women with a high level of PPD symptoms have often found to employ ineffective coping strategies, to be self-critical and have a negative attitude to social support (Priel & Besser, 2002).

### **Assessment of Risk Factors in a Maternal Mental Health Setting**

A comprehensive evaluation in a MMH setting relies on a focused history of the mother's mental health and current level of functioning, especially in her role as a mother. This includes the representational narrative description of the dyadic relationship (Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002; Zeanah, Boris, Scott-Heller; Hinshaw-Fuselier, Larrieu, Lewis, Palomino, Rovaris, & Valliere, 1997). Mowbray, Oyserman, Zemencuk and Ross (1995) state that literature describing mothers' perspectives of parenting is needed, and that an assessment of mothers with mental health problems should include this particular aspect. This is supported by a New Zealand study by Nightingale (2001), which found that clinicians from a Community Mental Health Service "appear to understand very little about the risks facing children in families where a parent has a severe mental illness" (p. 103). Most clinicians did not consider insights into how parents perceive themselves as caregivers and into the child's view of the caregiving conditions as relevant to their work. The author concluded that "without these understandings it is very unlikely that clinicians would be able to adopt a preventative and fully integrated approach to their practice with clients who are parents" (p. 103).

Early identification of disturbed patterns of attachment and relationship difficulties could provide MMH workers with the critical information needed to guide interventions. During the first few home-visits the support worker can establish a baseline measure of functioning from which to appraise particular changes of behaviour

and/or caregiving representations as expressed in the mothers' descriptions of their children (e. g., emotional involvement and caregiving sensitivity) and specific domains of strengths within the parent-child dyad which can be used to facilitate treatment. Assessment needs to be seen as an ongoing part of treatment and can be used to identify mothers who need additional services and/or ongoing group support at the end of their time with the MMH care provider.

The service type description of the National Service Specifications (Adult Mental Health Services, 2001) for MMH workers in New Zealand emphasises the mother's mental health and recovery, but does not include aspects of infant mental health. Even though many MMH workers acknowledge that women and their babies should not be treated in isolation, in practice the MMH worker's assessment does not usually include structured or less formal observations of parents' behaviour and/or an evaluation of mothers' perceptions of their children which allows insight into the meaning of their behaviour. MMH workers are in the opportune position to address not only maternal mental health issues and global child abuse and neglect, but also to systematically identify and address early signs of attachment difficulties. This can reduce the potential risk for short- and long-term negative consequences associated with aberrant infant-caregiver relationships and the transmission of insecure attachment (Benoit, Parker, & Zeanah, 1997).

The purpose of the present study was to investigate the use of the Working Model of the Child Interview (Zeanah et al., 1996), which has proved useful in clinical contexts in the

United States and England, as a suitable assessment instrument for a clinical population of the New Zealand maternal mental health system. The first aim was to determine whether specific scores on this instrument point to clinically relevant distortions of dyadic interactions as reflected in the mother's description of her child. The second aim was to consider the ways in which the diagnosed mental health problems of the mother relate to the distortions in the dyadic interaction. In accordance with existing data on the impact of maternal mental health on caregiving, it was expected that: (a) timing (e.g., PPD compared to long-standing mental health issues before the birth) and severity of the mother's mental disorder and (b) multiple risk factors (e. g., multiple symptomatology; perceived lack of social support) will have a negative impact on mothers' representations of their children, and that the representations of these caregivers will less likely be classified as Balanced. In the line with previous findings, it is also predicted that the interview can elicit specific domains of strengths and weaknesses of the dyadic relationships. The third aim therefore was to investigate whether the results point to specific features of maternal distortions that have not been found in the previous mental health assessment procedures of these mothers. Finally, it was hoped the study would point to how the use of the WMCI could benefit the programme of therapy and support offered to mothers in the mental health system, so that the needs of the children in their care may also be taken into account.



## **Method**

### **Recruitment of Participants**

A sample of 8 mothers currently involved with a Maternal Mental Health (MMH) service was recruited from two different New Zealand MMH clinics. This service provides assessments and interventions for mothers during pregnancy and after birth. Client referrals come from general practitioners, midwives, or other mental health professionals who issue a clinical diagnosis.

MMH workers were made aware of the research requirements and forwarded clients who were suitable for this study. Given the nature of the setting, clients' safety remained a paramount issue, and mothers who were psychotic and emotionally too unstable for the hour long interview, were not considered as participants. It was in fact very difficult to access clients willing and well enough to participate in this study. Mothers in the care of the mental health system are often so overwhelmed by their problems that they do not have the excess energy to participate in research. Additionally, the prospect of having their interview audio-taped is daunting to many of these caregivers. Originally I intended to recruit participants from only one centre, but had to approach several other MMH clinics to find enough participants for this study. Mothers who participated in this study had therefore either come to the end of their involvement with the MMH service or were stable enough to be interviewed in the MMH worker's presence.

## **Procedure**

The research was conducted in accordance with the ethical guidelines of the New Zealand Psychological Society (2002). The study was reviewed and approved by both the Massey University Human Ethics Committee and the Hawkes Bay Regional Ethics Committee. Additional approval from the Multi-Centre Committee had to be sought when other MMH centres were approached in order to obtain enough participants. These processes were very time-consuming, and it took six months before the actual research could begin. Permission to use the interview and coding manual was given by Charles Zeanah on the basis that it would be used with the supervision of a trained AAI coder, Sue Watson, who was the second rater of the interview transcripts.

The WMCI is an assessment instrument, and I originally intended to interview mothers in the initial stages of their involvement with the MMH system. This proved not to be a viable option, since many mothers are initially often too distressed and mentally unstable to be interviewed by a person who is not part of the service. Assessment is not a process however that only occurs or is completed in the first few sessions. It is an ongoing proceeding throughout the client's involvement with the service. Mothers were therefore approached only after their MMH worker judged them able to be interviewed.

Participants and the MMH workers were provided with information sheets outlining the research and what could be expected if they took part (Appendix 1A and 1B), as well as consent forms (Appendix 2A and 2B). Participants were informed verbally and in writing that their participation was voluntary, that any information they shared during

the interview would be confidential, and that they would still receive the support of their health workers if they declined to take part. In order to assure that cultural issues were taken into account, a consultative relationship with a Maori Mental Health worker was established (Appendix 3). Case consultation was not conducted, since the self-selected sample did not include Maori clients.

After an initial phone contact, the researcher and the MMH workers met to discuss the theoretical nature of the research, questions which would be asked in the interview using the WMCI and the particular role the health worker had in this study, including their time commitment. Permission and supervision from the clinical leaders was obtained.

One of the MMH workers suggested to send a letter of invitation to participate in my research (Appendix 4) to the clients she thought might be suitable for participation. It is interesting to note that not one mother responded to a mailed request, but when they were approached personally some of these mothers were quite willing to be interviewed. Subsequently it was decided that mothers should be approached by the MMH workers in person during one of the home visits. They were given the information sheet, and the nature of the study was explained to them in a language suitable for each client. The mothers had time to make a decision prior to the next visit by their support worker. One MMH worker approached mothers who participated in a 12-week parenting programme following the cessation of home visits by their support worker.

After giving informed consent (this included the sharing of a written summary of the interview with the MMH worker), three mothers were interviewed in the presence of their MMH worker (one interview was conducted in the MMH centre), while five participants opted to meet the researcher alone in their homes. Since the questions of the WMCI are open-ended, the interview provided an opportunity for the mothers to relate their caregiving experiences freely and to let concerns surface. All mothers felt at ease being interviewed - some even commented that they had enjoyed answering the questions - and several asked questions about the research after the interview. Off-tape comments also included personal stories, parenting experiences, and if and how they felt supported. On completion of the interview mothers were given a token of appreciation (a small gift for the child). During their next home visit or parenting group session, the MMH workers asked mothers for their feedback on their experience of being interviewed.

The Social Support Questionnaire was added to the research and mailed out with a freepost return envelope to the participants after the interviews had been conducted. This was to clarify what kind of support mothers perceived to be most helpful at this particular time in their lives and who was able to give them this support. All mothers had indicated that they had the support of a husband/partner/boyfriend on the demographic sheet (Appendix 5) filled out by the MMH worker with the mothers prior to the interview. But during the interviews it became evident that the perception of this support varied.

The demographic data sheet also included the diagnostic description for each participant. Mothers were diagnosed by their general practitioners or psychologists/psychiatrists from the regional mental health team prior to their involvement with the MMH system.

Particulars from the MMH workers' own observations and thoughts on the caregiving relationship were compared with outcomes from the interview either by email or a personal meeting only after the transcripts of the interview had been coded in order to avoid a bias approach in the coding process. MMH workers were provided with a short resume of the interview outcomes. Comments included particulars on observed mother-infant behaviour, the mother's ability to interpret her child's subjective experience, her understanding of developmental needs, and any concerns regarding support.

Interviews were conducted during one visit and took between one and one and a-half hours. All interviews were audio-taped, transcribed verbatim, and a coding manual was used to score the transcripts. Transcripts were rated by a second coder who was unaware of the clinical status of the mothers. Interrater agreement on these transcripts was 87.5% (7 out of 8 transcripts were agreed on). Full agreement was reached after conferring.

### **Assessment Instruments**

*Representations of the Infant.* The Working Model of the Child Interview (WMCI) (Appendix 6) was developed by Zeanah, Benoit, Barton, and Hirshberg (1996) to study mothers' perceptions of their children (from pre-birth to 5 years), in order to understand

differences in working models of caregiving. The WMCI was originally devised as a research instrument, but the WMCI may also be used as an assessment tool in a clinical setting (Zeanah & Benoit, 1995). The narrative patterns of the WMCI have been found to compare to those of mothers rated as *secure*, *avoidant*, and *preoccupied* with the AAI (Zeanah & Benoit, 1995; Larrieu & Zeanah, 2004), which is suggestive of the instrument's concurrent validity. Studies comparing mothers' WMCI classifications and their infants' SS classifications found a concordance rate of .40 to .50 in different studies (Benoit et al., 1997). Interrater reliability for overall classification of the WMCI ranges between .57 and .94. Test-retest stability in one study (Benoit et al., 1997) for *balanced* and *distorted* classifications was .59, while *disengaged* representations were less stable over one year, probably since the interviews were conducted while the mothers were pregnant, and giving birth and caring for the infant influence emotional involvement.

In this study the WMCI was used as a research tool to assess parents' perceptions and subjective experience of their infants and their relationship with their infants. Since representations are of qualitative nature, the general approach and the methods of data collection and analysis utilised in this research fall within the qualitative tradition of research. This methodology is well suited to the exploratory nature of the study and the theoretical principles of attachment theory. The sixteen questions of the WMCI are open-ended and facilitate a mother's narrative account of her perceptions and subjective experience of her child, as well as perceived and anticipated difficulties with her infant's behaviour and development. Based on the coding of the AAI, the formal

qualitative characteristics of the narrative discourse - which include Grice's (1975) maxims on coherence - are considered important, since they specify differences in the organisation of the IWMs of caregiving.

The optional introductory section (Questions 1a-g) of the interview regarding the experience of pregnancy and developmental history of the child was included in this research, even though most of these questions were also part of the standard assessment procedure used by the MMH workers. I felt that this particular segment of the interview was helpful in establishing a rapport with the mothers. These questions were also evaluated for form not just content as in a MMH assessment.

The interview questions were changed to future tense to assess one mother's representations during her pregnancy, and questions about the labour, milestones and behaviour of the child after birth, were omitted (Appendix 7). This adapted form of the WMCi has shown to be a valid assessment tool of prenatal representations (Benoit et al., 1997; Huth-Bocks, Levendosky, Bogat, & von Eye, 2004a; Huth-Bocks et al., 2004b).

Scale ratings have been used as described in the coding manual to quantify qualities of discourse for each transcript. These were assigned to one of the three main categories that correspond with different representational models: *balanced*, *disengaged*, or *distorted*. Representations classified as *Balanced* indicate that the caregiver knows and appreciates the child as an individual. Subtypes of this classification are: *Full*,

*Restricted*, and *Strained*. *Disengaged* representations convey the sense that the caregiver is not aware of the infant's subjective experience, or if recognized, it is not valued, and the impact of parenting on the child is dismissed. Subtypes are: *Impoverished* and *Suppressed*. Caregivers coded as *Distorted* tend to be distracted by other concerns and are often overwhelmed by the task of parenting, since they have little insight into the child's world and lack an understanding of the child's developmental needs. Subtypes are: *Distracted*, *Confused*, *Role-Reversed*, and *Self-Involved*. These subtypes are to be understood as varying dimensions of the three main classifications and allow for a more distinct coding of the interviews which points to specific strengths or needs of a caregiver-infant dyad (see Appendix 8 for an in-depth description of the subcategories).

The classifications were based on the assessment of subscale features. These were not a direct assessment of infant or caregiver behaviour, but indicated the degree to which characteristics of the scales featured in the caregiver's discourse: 1. The *Richness of Perceptions* scale show insights into the degree to which the mother understands the child's personality, how much she knows about her child. Transcripts with high ratings on this scale give an insight into the child's personality, feelings, and behaviour. 2. *Openness to Change* measures the flexibility of the mother's representation to accommodate a growing understanding of the infant, and how open the caregiver is to new information or a different perspective on parenting. 3. The *Intensity of Involvement* scale assesses the degree of the caregiver's psychological involvement with the child. The *Affective Tone* of transcripts with high ratings on this scale may vary from anxious



preoccupation to joyful immersion. 4. The *Coherence* scale is analogous to the coherence scale of the AAI and measures the overall organisation and coherency of the transcript. At the high end of the scale the speaker conveys a thoughtful and clear description and is responsive to probes. The inability to support global descriptions and diversion from the topic lower the rating on this scale. 5. The *Caregiving Sensitivity* scale assesses the degree with which the caregiver recognises the infant as a separate but dependent individual and the quality of response to those needs. High ratings on this scale indicate also that the caregiving responses appear to be consistent. 6. *Acceptance* measures the caregiver's acceptance of responsibilities and demands of caregiving. Some caregivers find it easier to accept certain developmental stages (like the infant's need for dependency vs. a toddler's need for exploration and autonomy) more than others.

The two content features of the subscales were: 1. *Infant Difficulty* assesses the degree of how difficult the caregiver perceives the child or the caregiving role to be. 2. *Fear for Safety* assesses the caregiver's worry about the child's health and safety. High scores indicate an irrational fear of loss and this affects the caregiving behaviour. A score of 3 or greater suggests that the quality of the fear needs to be considered for its implications regarding caregiving. If the worry is rational (e.g., the death of a previous child) Zeanah suggests to place the score at the mid-range of the scale.

Additionally four subscales were used to assess the overall *Affective Tone* of the narratives: 1. Joy; 2. Anger; 3. Anxiety; 4. Indifference. All features were rated on a five-point scale, ranging from 1 (none) to 5 (extreme).

Zeanah advises to consider the age and developmental level of the child when coding these scales, since a mother's perception of her child will increase as the child grows older. Descriptions of the infant's personality, on the other hand, ought to be more flexible and open to change while the child is very young.

*Maternal Social Support.* The Norbeck Social Support Questionnaire (NSSQ; Norbeck, Lindsey, & Carrieri, 1981) (Appendix 9) has been used in a variety of populations, including clinical samples (Frank-Stromborg & Olsen, 2004). It is a 9-item, self-administered questionnaire tapping three major components of social support: functional aspects (affect, affirmation, and aid); network (number in network, duration of relationships, frequency of contact); loss (number of support categories in which loss occurred and perceived amount of support loss). The rating scale ranges from 0 (not at all) to 4 (a great deal).

Norbeck et al. (1981; 1983) reported high internal consistency alphas of .89 or higher, with high correlations (.88 to .96) among the subscale items, and a test-retest reliability of .85 to .92. Concurrent validity with other social support questionnaires was moderate (.31 to .56 for subscales).

For my study revised scoring instructions of the NSSQ (1995) were downloaded from following Website: [nurseweb.ucsf.edu/www/NSSQ-instrument.pdf](http://nurseweb.ucsf.edu/www/NSSQ-instrument.pdf)

## **Results**

Results are presented in four sections. First, descriptive information for subscale scores as related to the three main classifications and their subtypes is presented together with clinical excerpts of parents' narratives. Second, the relationship between timing of post-partum depression, multiple risk and protective factors, and WMCI classifications is examined. The third section deals with findings from the WMCI which added insight into maternal distortions regarding their children to the MMH workers' assessments. Finally, specific questions of the WMCI which were found to point most strongly to individual differences in parents' description and subjective experience of their children are presented. To begin with, resulting demographic data are shown.

### **Demographic Data**

The mothers' age at birth of target child ranged from 17 years to 30 years ( $M = 27.5$ ) and infants ranged in age from pre-birth to 4 years ( $M = 1.6$ ). Five of the target children were first born (62.5 %), two were second born (25 %), and one was third born (12.5 %). 7 mothers had a husband/partner (87.5 %). Diagnostic descriptions of the participants, as noted by the MMH workers, included post partum psychosis (PPP), post-partum depression (PPD), history of severe depression, Borderline Personality traits, and Obsessive Compulsive Disorder (OCD). Involvement with the MMH service at the time of the interview ranged between 2.5 months to 18 months ( $M = 7.6$ ). This did not include time of participation in a parenting support group as part of the MMH interventions in one of the centres involved.

### **Brief Vignettes of the Eight Participants**

Participant #1: Moira is 23 years old. She and her partner have an 18-months-old child. The pregnancy had not been planned, but she wanted to keep the baby. After the birth Moira felt restless and agitated, and she could not sleep for several days and nights. When Moira and her baby had been home for seven days, she smoked marijuana – a habit she had continued during pregnancy even though she felt guilty about this – and soon after experienced a severe episode of PPP. While she was in the mental health unit her parents and partner looked after the child. Shortly after her release, she had a second episode, again after smoking marijuana. When Moira came home one month later, the change-over in caregiving was difficult for both the grandmother and the mother. Moira felt that the baby didn't really need her. The MMH worker suggested to the grandparents to take a holiday, so that Moira could take charge of her role as a mother. At the time of the interview Moira was a relatively competent and caring mother. With the ongoing support of her partner and parents she was able to work part-time in the evenings. MMH visits were discontinued when the child was nine months old, but contact had been re-established at the time of the interview, since Moira had developed clinical depression and a health worker from another agency had raised concerns about the child's developmental delays.

Participant #2: Sue, aged 27, had been involved with mental health services and crisis teams even before the loss of her first child seven years prior to the interview. The 9-months-old boy died of an illness. She and her husband now have a 3-year-old boy and a three months old girl. Sue had been adopted at birth. She had made contact with her

birth-mother three years earlier, but the relationship became difficult and ended just prior to the birth of the last baby. Sue was greatly distressed about this 'second loss' of her birth-mother, and the MMH worker was concerned how this might interfere with her caregiving abilities. Sue was aware of her children's needs and could consider how her relationship with them and the interactions with their father influenced their development. She did not mention her current worries or problems during the interview, but was able to talk about the loss of her child in a coherent and appropriate manner.

Participant #3: PPD went undiagnosed after Liann's first birth. She did not feel close to the baby during pregnancy – which had been planned - or after the birth of the child. The baby was difficult to settle, and even with the support of her mother and husband Liann, then 29, found it difficult to cope. Even now she describes caregiving as a role she does not enjoy, but she can put her difficulties into perspective. She sees her own mental health problems rather than her daughter's temperament as the cause for this difficult relationship. Experiences like the more positive caregiving interactions with the two year old second child (described as easy going), her 12-months involvement with the MMH service after the second birth (including a parenting course), and the ongoing use of antidepressants have enabled her to cope better and to 'normalise' her 4-year-old daughter's behaviour. Liann is back working part-time at a supermarket and has rejoined her former sports club.

Participant #4: This 33-year-old mother interacted with her six months old baby most lovingly. Judith held her daughter closely to her throughout most of the interview. Her

story of long-standing depression, suicidal attempts, and partner problems was interspersed by cuddles with the baby. Her 12-year-old daughter had been 'a problem right from the start' and lived now with her father, since Judith's new partner did not get on with her. Pregnancy with this baby had been a most unhappy and difficult time for Judith. The father of the child was not very supportive at the beginning, and both he and Judith's mother wanted her to abort the baby. During this time she relied on her 12-year-old daughter for emotional support. Once the baby was born, her mother supported her and helped to look after the baby. Two months later Judith moved in with the father of the child. The MMH worker was aware that Judith had been sexually abused as a child and had worked in the sex industry for many years. MMH support was terminated after three months, by which time medication had made it possible for this mother to get through most days.

Participant #5: Maree, aged 37, is the mother of 17-months-old triplets and their 4-year-old brother. Complications after the birth meant that the girls were in the neonatal unit for 10 weeks. One of the triplets had to be flown to Wellington for further specialist care and Maree stayed with her. Severe PPD interfered with the mother's already overextended capacity to care for all of her children. She described herself as always having been anxious and having to check on her children every night. Once the children are in bed, she works until late to get everything prepared and cleaned for the next day. She explained that this is habitual, and that she has been diagnosed with Obsessive Compulsive Disorder (OCD). The government paid for a part-time nanny, and at the time of the interview the triplets related to her as the second most important attachment

figure, since the father was often away from home. Funding for the nanny was to be discontinued, since it was assumed that the mother should be able to cope now that the children were older. Maree had also discontinued taking her medication, since all the mothers in the parenting course she attended had done so. During the interview Maree's emotions fluctuated from tearful sadness to joyful laughter. She was frightened of having to cope without the help of her nanny and worried about some of her caregiving behaviour. Previously she had asked the MMH worker to be enrolled in an anger management course. Following the interview MMH care continued, and funding for the nanny was extended.

Participant #6: Lisa, a 17-year-old pregnant teenager, has suffered from anxiety and depression for several years. She has periods of self-harming thoughts and suicidal ideations and has been diagnosed with Borderline Personality Traits. Lisa lives with her mother who has a diagnosed mental illness as well as an alcohol addiction. Her brother is intellectually and physically disabled. She is the support person for both her mother and brother. During the interview Lisa outlined how in the future her child would relate to her boyfriend of two months (who also has mental health problems) as the father and how they would function as a family. The mental health team and the MMH worker have devised a long-term plan of care for Lisa.

Participant #7: When I met Abby, aged 27, she had a 3-year-old daughter and was nearly 8 months pregnant with her second child. Severe PPD after the first child went undiagnosed, and symptoms of severe depression carried over into her second



pregnancy. She had been in the care of the MMH system for the last two months before the interview. When Abby had been pregnant the first time, she lived with her twin sister, finishing her degree in horticulture at the EIT. She described this time as very stressful and unhappy. After the baby was born, her family did most of the caregiving. During the interview she was not able to recall specific memories from this period of her life, nor did she remember any milestones of her daughter's development. When she fell pregnant for the second time, she and her daughter moved in with her partner and father of the children. Abby does not like living in her partner's house, since it is in need of repair and does not afford her the home comforts she longed for, but the father supports her in the caregiving of their 3-year-old daughter. Ongoing depression and lack of energy means that her contact with the child is minimal. For several hours a day the child is at a day care centre and on the weekends she often stays with her grandparents.

Participant #8: Beth, aged 27, did not feel connected to her baby after birth. He was like "a stranger" to her and she went through the routine of looking after the infant's physical needs without any emotional attachment. This did not change once she was on medication after being diagnosed with PPD. It was only once the child could talk and communicate his needs to her that Beth was able form a closer relationship, something like a "friendship" with her son. She described her husband as the more sensitive caregiver who is able to give the child physical contact and discern developmentally appropriate behaviour from 'naughty' behaviour. Marital problems and the husband's own mental health issues (a diagnosis of ODC) together with the mother's ongoing depressive episodes pose a risk factor to this child's attachment and emotional

development. Beth was 9 weeks pregnant with the second child at the time of the interview, and she will receive the support of a MMH worker throughout her pregnancy and for some time after the birth.

### **Subscale Scores and their Relevance to Maternal Distortions**

The study's first hypothesis involved associations between subscale scores of the WMCI and clinically relevant distortions of mothers' perceptions of their child. As seen on Table 2 (facing p.35), three of the eight transcripts (37.5%) fell into the *Balanced* category, two (25%) into the *Distorted* category, and three (37.5%) were classified as *Disengaged*. Two of the *Balanced* classifications were *Restricted* – the representations were somewhat affectively restricted with some aspects of the disengaged representations. One fell under the subcategory of *Strained* – the child was perceived as difficult, putting a strain onto the relationship. The two subtypes for the *Distorted* category were *Self-Involved* – marked by a pre-occupation with self and a dependency on the infant for emotional well-being – and *Distracted* – where the caregiver was overwhelmed by multiple risk-factors. All three transcripts classified as *Disengaged* fell under the *Impoverished* subtype. These transcripts were characterized by a significant lack of psychological involvement with the child and an understanding of the infant as an individual.

It has to be pointed out that two of these transcripts come from anomalous participants. One interview was conducted pre-birth and one with a mother who has had a multiple

birth. While previous research has established that the WMCI is a reliable and valid instrument to categorise mothers' perceptions of their yet unborn child (Huth-Bocks et al., 2004b; Zeanah et al., 1996), no reference could be found in the literature about the use of the interview with mothers who have had a multiple birth. For the purpose of this study - which was to test the use of the WMCI in the clinical setting of the MMH system and to explore additional findings from this instrument to routine MMH assessment outcomes – these two interviews have been included into this research.

Table 2 shows that particular scores of the subscales related directly to each other as well as to the overall classifications and their subtypes. Subscales are divided into qualitative features, content features (infant difficulty and fear of safety), and affective tone of the representations.

### **Qualitative Features and Affective Tone of the Transcripts**

Mothers whose perceptions were rated *Balanced* had thought about their children and could provide examples to support their statements. They were sensitive to the affective experiences and needs of their children and accepted them as individuals. Their discourse was more coherent than those of the *Distorted* and *Disengaged* classifications. In particular scores from the richness of perception, openness to change, intensity of involvement, and caregiving sensitivity scales were indicative of the mothers' ability to be reflective. Both mothers in the *Restricted* group expressed a moderate amount of joy and pride in their children, even though this was mixed with guilt in Moira's (P#1) case

Table 2

*Subscale Scores as Related to the Classifications of the 8 Transcripts*

<b>WMCI Subscales</b>	<i>Balanced Restricted</i> P #1	<i>Balanced Restricted</i> P #2	<i>Balanced Strained</i> P #3	<i>Distorted Self-Involved (F)</i> P #4	<i>Distorted Distracted (F)</i> * P #5	<i>Disengged Impoverished</i> * P #6	<i>Disengaged Impoverished</i> P #7	<i>Disengaged Impoverished</i> P #8
Richness of Perceptions	4	4	3	2	3	1	1	2
Openness to Change	3	4	3	2	3	1	2	2
Intensity of Involvement	3	3	3	4	3	1	1	1
Coherence	3	4	4	2-3	2-3	1-2	1	1
Caregiving Sensitivity	3	4	3-4	3	2-3	1	2	1
Acceptance	4	4	3	5	2-3	2	2	1
Infant Difficulty	1	1	4	1	5	Pre-birth	2	1
Fear of Safety	1	3	1	4	5	Pre-birth	1	1
Joy	4	3	2	4	2	1	1	2
Pride	3	3	2	1	1	1	2	1
Anger	1	1	1	1	4	1	1	2
Disappointment	1	1	1	1	3	1	1	1
Anxiety	1	3	1	4	4	1	1	1
Guilt	4	1	1	2	5	1	1-2	1
Indifference	1	1	3	1	1	4	4	5

\* coding of transcripts from anomalous participants

Note: scores are rated on a five-point scale, ranging from 1 (none) to 5 (extreme)

and anxiety in Sue's (P#2) transcript. Liann's (P#3) transcript classified as *Balanced-Strained* showed more indifference and less joy and pride in her child.

Following are extracts from Sue's (P#2) transcript classified as *Balanced-Restricted*. She was able to integrate the loss of her first child seven years ago in a clear and affective manner, which is, according to Main (1991), evidence for a coherent discourse. (Interview questions are indicated by bold print.)

**Do you ever worry about your child?** Ah yes, all the time. I am constantly checking. Yea, I mean my first one passed away, so I am definitely paranoid about their health, yea, and I know I am not guaranteed them for life. So that makes it hard. So I am always checking on her and the same with A. when he was – and it's the same still now, I go and check on him every night, and he is nearly 4. So I am probably a bit more paranoid.

As seen on Table 2, her narration was also characterized by psychological involvement and openness to change. Even though the target child was only three months old, Sue could give a clear description of her child's character and support her statements with examples.

**Describe your impressions of your child's personality.** I definitely would say 'happy' and 'alert', 'beautiful' (*laughs*). She is definitely a really happy child and she definitely likes being around other people. As long as she can see you, she is happy, yea, if you leave her on the bouncer for too long, she is not happy about that. (*mother is asked to give some examples*) I don't have to do much to make her laugh, because she is just so happy. You just have to touch her nose and she starts laughing, yea, things like that. **How would you describe your relationship to your child now?** I think, like with all my kids it takes some time to bond, because, you know, they are a stranger, and then you think you've grown them inside, but when they come out they are still a stranger. So I think its just the bonding – bonding takes a little while, so yea ...so I am definitely starting to bond with her. **How do you feel your relationship with your child has affected her personality?** I think, because

I am really at ease with her that makes her quite content. Because with my first baby I was – I didn't really know what I was doing, I was so tense and I wanted to be perfect, that – they pick up on that.

At the same time the experience of loss somewhat restricted the mother's full involvement with her baby daughter ("bonding takes a little while"). Emotional distancing was also noticeable in her past and future representations of her child. Descriptions were somewhat stereotypical and not well integrated. Sue lapsed into descriptions of herself rather than her infant.

**What were your impressions about the baby during pregnancy?** Any impressions ... how do you mean? Like how they turn out? **Yes.** Ahm ... not really, no. Yes, I sort of thought it might have been a girl, because its – because my symptoms were a lot different with this pregnancy, yea. (later during the interview) **What do you expect your child to be like as an adolescent?** God, I have no idea ... what I hope her to be (laughs) ... I just hope she is – that I do alright in bringing her up, because ... yea ... and she is a good girl (laughs) ... but I know that she will ... at some stage as all kids do, but I hope I will have the right tools to be able to deal with that.

The two subtypes of the *Distorted* classification were distinguished by a cluster of scores on the scales for the affective tone of the representations. The interview classified as *Distorted Self-Involved* conveyed that this mother (P#4) derived a lot of joy from her baby, and her interactions with the infant were very loving and caring; in fact she described herself as a "cling-on" or "paua" mum, a very accurate description of this mother's over-involvement with her child. The discourse is characterised by the mother's pre-occupation with self. She has difficulty to focus on the infant, and the child seems to fulfil a "therapeutic" (mother's comment) role in their relationship. Her fear of loss could be called irrational since she had not lost a previous child and her

baby was not sick. Based on the entire interview the scores for coherence, openness to change, and richness of perceptions of this transcript fell into the lower end of the scale.

**How would you describe your relationship with your child now?** Very close, love her to pieces, ... I do .. I have anxieties where ... I think I wouldn't be able to survive if she – if something bad happened to her, so, and I keep having these bad thoughts (?) 'Just calm down, don't worry about it, just enjoy her while have her.' **So what pleases you most about the relationship with your baby?** She keeps me busy and ... while I'm busy I'm not dwelling, and while I'm not dwelling I don't start worrying about this, that and the rest, and then it doesn't get me into depression. **How do you feel the relationship with your child has affected your child's personality?** It has made me more relaxed, more patient, and I try very hard not to get angry.

In the transcript classified as *Distorted Distracted* the demand of the caregiving for 18 months old triplets and a four year old sibling on the mother's physical and emotional resources took precedence over her actual perceptions of her children. Maree (P#5) expressed guilt and disappointment in her ability to parent the children she loves, but was not sure how her caregiving behaviour is affecting the children – her descriptions are contradictory on this subject – and felt angry with the overwhelming demands of the caregiving responsibility. These major affective themes reflect the overall tone of the interview.

**How do you think your relationship with your girls has affected their personalities?** I don't know if it has yet ..... C. actually has started screaming this week. And she'll go "Ahhh" at you, and she has learned that from me, "haven't you, C." (to child). If something is not going right, she'll go "Ahhh", and she'll get really cross and verbal, which is – which is from me (laughs). ..... My biggest concern is – ahm – me getting so beyond it (starts crying) and I am getting so cross with them, and I get so angry and violent, and I swear at them, and I am scared how that is going to affect them, and I get scared that I am going to hurt them. (later in the interview) **When the girls become emotionally upset, what happens? ..... What would upset them emotionally?** I don't know. I haven't noticed. (later) **Think for a moment of your three girls as adults. What hopes and fears do you have**

**about that time?** I just hope they find the right man to marry and ..... and I am worried about them getting hurt emotionally, yea ..... **Can you imagine what kind of relationship you will have with them?** I just hope they don't have multiple births themselves (laughs). Yea, I think we will be close. I think so, I hope so. As long as I haven't done too much damage already to them (crying).

While all subcategories for the *Disengaged* group fell into the lower end of the rating scale (see Table 2, facing p.45) these transcripts scored high on the indifference scale. An additional feature was the depressed or flat affective tone of these representations. The interviews did not convey a sense of who the children are as individuals or how they might experience the dyadic relationship. The extremely low scores on the intensity of involvement scale bespeak the mothers' psychological detachment from their children. The following extracts from Beth's (P#8) transcript are examples of the mother's disengagement from the child.

**What was the first reaction when you held your baby for the first time?** (*The baby was in neo-natal care for the first three days after the birth*) It just – it just didn't feel like mine. I just – I didn't get to know, you know, I didn't get to hold it as soon as I've had it, and because it was taken away, and it was three days, I – I – it took me such a long time to even, you know, I said to M. 'its like we've adopted him'. Like if it was my baby I would love it. (later in the interview) **Do you ever worry about your child?** Its so long that I didn't worry about anything, that I sort of- you know, if there is one positive thing about being depressed its that I don't worry a lot about him.

The next passage concerns the mother's lack of appreciation of her child's experience.

**What pleases you most about the relationship with your child?** I think just the understanding of each other. Like once we could start – you know I could say to him 'Did you want a drink?' or 'Are you hungry?' its taken the frustration for both of us out. Well, I know that's for me, until he could understand what I was saying, I did, yea ... What was the question? (*Question is repeated*) Just the understanding of each other – I feel like we are friends now.



The examples from a second transcript (P#7) coded as *Disengaged* reflect the overall tone of these interviews. Perceptions of the children were unelaborated and the transcripts lacked coherency.

**Do you feel there is something unique and special about your child compared what you know of other children? .....** Hm ..... I don't know really ..... **You actually mentioned something before about her being 2 years old and able to do this puzzle.** Ah that, yea I do think – I think she is ..... sort of ..... (inaudible) **Is she special in any way?** I don't know – I think its just because she is my daughter, so yea ... (later) **How do you feel that your relationship with her has affected her personality? .....** As a person she is now? **How have you affected that .... if at all? .....**hm ...  
**Take your time.** mh ..... **Do you feel at all that the way she is now has anything to do with you? .....** Hopefully ..... I think it could ..... like teaching her right from wrong.

### Content Features of the Transcripts

Both *Distorted* transcripts were characterised by high scores on the subscale *Fear of Safety* - an irrational fear of loss which also affected the caregiving behaviour (e.g., mothers repeatedly checked on their children during the night) – and was indicated by the symbol (F) after the classification. Sue (P#2) in the *Balanced Restricted* group who had experienced the loss of a child scored only moderately for fear of safety, even though her anxiety was pervasive and affected her behaviour towards her children. Zeanah et al. (1996) advised that if the caregiver's worry “is connected to a rational source (e.g., a sibling died)” (p.11) scores should fall into the mid-range on these subscales.

Only two mothers of this sample (P#4 and P#5) rated high on the *Infant Difficulty* scale. This was a major theme in the *Distorted Distracted* (P#5) transcript, but it was her role as caregiver of triplets that this mother perceived as difficult rather than the actual behaviour of her children. In comparison, infant difficulty in the *Balanced Strained* transcript interfered less with this mother's (P#3) acceptance and sensitivity towards her child. The following extracts from the transcript show that while Lianne perceives her four year old child as difficult, she is open to change, that is, the child's behaviour might change or become even useful. She can also place the difficulty with her child into context. The discourse is moderately fluent (coherent) and role-reversal is acknowledged.

**Is there any behaviour now you find most difficult to handle?** Just, yea, just that she won't give in, and I have to negotiate all the time, which I find tiring. **And what do you feel like doing when she reacts in this way?** I say to her 'Can you just not argue with me. Can you just do as I ask.' And just that she doesn't listen, and she goes off and does whatever she wants to. **What do you feel like doing at that time?** Sometimes I feel like screaming at her. Yes, I do. And some days I'm just think, I can't do this (laughs), I'm not cut out to be her m- I'm not cut out to be your mum. **So what do you actually do?** Ahm ... some days I just say 'H., if you really want to do it, go and do it, but I won't be happy, and she comes and she goes 'Are you still my friend?' and I say 'Well, I don't know.' And sometimes I think – afterwards I think, oh, that's terrible (laughs), I shouldn't be doing this. But she's alright. She's fine. We come through it. **And what do you imagine will happen with this behaviour as she grows older?** Well, hopefully it will .... be good. Hopefully she will be – not so much stubborn – but it will make her a more independent and take her further, than it would have – I'm not – I don't like conflict and I don't like, you know, I am the peace-maker. (later in the interview) **Has your relationship to her changed at all over time?** Yes, I like her more now (laughs). I don't – I have decided I am not a baby person, I am definitely more - when they can do things and – I like that fact that she is independent. That is good ... I think we have both – I think more too that I have changed, and that I don't get hung up about doing everything perfectly so badly.

### **Moderating Factors Associated with Mothers' Representations**

The study's second hypothesis involved associations between diagnosed mental health problems, multiple risk factors, and the WMCI classifications. At the time of the interview, all participants were on medication and involved with the MMH system. Of the four mothers who had come to the end of their involvement with the MMH service, three participated in a 12-week parenting course run by one of the MMH services involved in this study, and four needed ongoing support from their MMH worker. All mothers had been diagnosed with PPD which was severe and/or lasted for at least three months after birth. The lack of absolute clarity about the clinical label of PPD has to be noted here. I have followed the National MMH service guidelines for the definition of PPD and labelled depressions one year after the birth as 'clinical depression'. Many mothers enter the MMH service with longstanding, unresolved and previously undiagnosed depression and personal issues like physical, emotional, or sexual abuse as a child. The label of PPD as opposed to clinical depression or even PTSD in this case is therefore debatable. Only two of the mothers in this sample had a diagnosed history of depression before the birth of their first child. The diagnostic description of OCD for the mother with the multiple births indicated mental health issues before the birth of the children.

As seen on Table 3, five of the seven mothers who were interviewed post-partum had experienced a separation from their child straight after birth, sometimes for more than

Table 3

*WMCi Classifications and Moderating Risk and Protective Factors*

<b>WMCi classification</b>	<b>time involvement with MMH system</b>	<b>age of target child</b>	<b>diagnostic description</b> 1 = before birth 2 = after birth 3 = at time of interview	<b>multiple risk factors</b>	<b>protective factors</b> (social support according to Norbeck quest. , interview & dem. data )
Balanced Restricted	9 mths follow-up sessions at time of interview	1 yr 6 mths	2 PPP 3 clin. depr.	separation from child after birth while mother in MH unit 2X	partner; parents; friends; MMH worker
Balanced Restricted	3 mths; previous involvement with MH service for 16 yrs	3 mths	1 clin. depr. 2 PPD	loss of first child at 9 mths; long-standing mental health issues; mother adopted at birth	<u>Norbeck</u> ; partner; adoptive mother; friends; sisters
Balanced Strained	12 mths for 2 <sup>nd</sup> child; 12 week parent program	4 yrs	2 PPD 3 clin. depr.	separation from child after birth -- child in neonatal unit; PPD not diagnosed until after 2 <sup>nd</sup> child	husband; mother; MMH parenting programme
Distorted (F) Self-Involved	5 mths; to be terminated	5 mths	1 clin. depr. & suicidal ideations 2 PPD	separation from child after birth-- child in neonatal unit; long-standing mental health issues; partner difficulties; sexual abuse as child	partner; mother
Distorted (F) Distracted	15 mths; 12 week parenting program	17 mths	2 clin. depr. & OCD	separation from child after birth - child in neonatal unit; multiple birth (triplets); comorbid diagnosis	<u>Norbeck</u> ; (only partially filled in) husband; part-time nanny; sister; mother; neighbours; friends; GP; Plunket nurse
Disengaged Impoverished	3 mths; previous involvement with MH service	pre-birth – 7 mths into pregnancy	1 BPD traits, anx. & depr., suicidal ideations	long-standing mental health issues; cares for mother & brother with ment. health issues; teen-age pregnancy	boy-friend (of 2 mths)
Disengaged Impoverished	2 mths for 2 <sup>nd</sup> pregnancy	3 yrs	2 PPD 3 clin. depr.	Caesarean birth; pregnant with 2 <sup>nd</sup> child	<u>Norbeck</u> ; partner; mum; sister; brother; friends
Disengaged Impoverished	12 mths after 1 <sup>st</sup> child; 12 week parenting program	2 yrs	2 PPD 3 clin. depr.	separation from child after birth-- child in neonatal unit; pregnant with 2 <sup>nd</sup> child; marital problems; husband suffers from ment. health problems	<u>Norbeck</u> ; Mother; friends; neighbour; sisters; work mate (did not note husband but mentioned in interview)

one week, while their infants stayed in the neonatal unit or with family, as in the case of the mother who experienced two episodes of PPP and had to spend several weeks in a MH unit. Four of these mothers stated that they felt a distinct lack of attachment with their baby on their return home. While both mothers in the Distorted group vividly recalled the worry about their infant's health during this time, this seemed to be less of an issue for the remaining three mothers. Beth (P#8) whose transcript fell into the Disengaged group described the separation as follows:

.... I just think, you know, because he was taken - you know, I didn't get there, you know, and I still today think, you know, I wonder if I would have felt different if I got to hold him straight away and .. ahm ... yea I just - and because like my husband is - like he suffers from anxiety quite badly, and I always have to be - feel like I have to be positive - he panicked when they took him away, and I was like 'no, no, he's going to be fine'. Yea, I sort of - sort of made that 'no, no, he's fine, don't worry', you know, cut myself off from my own feelings, sort of thing, and ... I said 'you go with the baby, you go to the neo-natal unit. I'll be alright, I just stay here. You go and see what is happening'. Yea, and I just - and I sort of thought, when I first - because when I was for the first time up for three days, 'this is fine, this is good', you know, I didn't have a crying baby and I didn't have to bathe it, I didn't really do - you know, I sort of had a really good birth and didn't have any stitches, you know, and then like that third day, I just sort of thought the world was (inaudible).

This extract is an example of the various factors influential on the trajectory of mother-infant attachment. The husband's mental health problem (diagnosed OCD) could be considered an added stressor impacting on the marital relationship and consequently on the mother's functioning as a caregiver. It is interesting to note that Beth did not mention her husband as a support person on the Norbeck social support questionnaire, but stated during the interview, that while they had marital problems, he was a

supportive father and able to meet their son's need for closeness and intimate play better than herself. If this is so, the attachment relationship to this second caregiver can be seen as a protective influence on the child's development (Brisch, 2004).

The transcripts classified as Distorted (P#4 and P#5) and the pre-birth interview coded as Disengaged (P#6) highlighted the interplay between a history of mental illness and multiple risk factors - such as multiple symptomatology, relationship problems, sexual abuse during childhood, and teenage pregnancy – and their transactional influence on maternal caregiving representations and behaviour. Pregnancy with the second child in the Disengaged group (P#6 and P#7) was added to the list of possible risk factors to child development, since unless intervening changes in the quality of caregiving were facilitated or contextual circumstances changed, the same disengaged mother-infant interactions which leave the children vulnerable to neglect might be repeated with the second child. Data on the socioeconomic situation of the participants was not included in this study, but observation from home visits indicated that all but three mothers (P#4, P#6, and P#7) lived in a middle-class environment.

Protective factors, such as the perception of social support, were investigated, but only four Norbeck social support questionnaires were returned, one with incomplete data. It was therefore not possible to gain an overall insight into how well these mothers felt supported through the use of this instrument, but the returned questionnaires confirmed data from the interviews. Most mothers felt supported by their partners (all mothers from the Balanced and two from the Disengaged group made a special mentioning of

their role as fathers), other family members, and/or friends. Moira (P#1) specifically mentioned the support from her MMH worker and Liann (P#3) commented on the benefits of the MMH clinic's parenting program. Maree (P#5) had the help of a government funded part-time nanny since the birth of the children and acknowledged the support of her Plunket nurse and GP (she only answered affirmative aspects of social support - Q. 3 and 4 of Norbeck). The workers from the MMH and mental health system provided the most stable support for the teen-age pregnant mother (P#6) who at times had to look after both her mother and brother.

#### **Additional Findings from the WMCI to the MMH Assessment**

Comparisons of findings from the interviews with findings from previous mental health assessments were made in order to test hypothesis three regarding the use of the WMCI as an assessment tool in the MMH sector. MMH workers had a detailed knowledge about the mothers' clinical and personal history, and as expected, results from this study did not reveal previously unnoticed global neglect or abuse. Since the emphasis is on the mother's mental health rather than her perceptions of her child in a MMH assessment, the emerging data from this research clustered around new findings which can help to support mothers in their role as caregivers and alert to risks factors to infant attachment and ensuing development.

Findings from the interview coded as Balanced Strained (P#3) did not provide the MMH worker with practical information. Liann's caregiving problems with her four

year old child did not fall under the scope of a MMH worker's job description. This participant was in MMH care after the birth of her 2-year-old child, but had wanted to talk about her difficult time of parenting while having severe and at the time undiagnosed PPD.

Interview comments from Moira's (P#1) transcript coded as Balanced Restricted clarified concerns about the developmental delays of the one and a half year old child (these came from another agency). The MMH worker had observed this mother growing into a mindful and conscience caregiver after initial difficulties of bonding. Yet the transcript showed that her perception of the child's developmental need for dependency and nurturing was restricted. She inferred that the early experience of separation had made her child 'independent'. She also did not want to repeat her own parenting which she described as intrusive. Her answer to the question of how her relationship might have affected her child's personality, gave an insight into her caregiving behaviour.

I don't really know, I think he's - oh, I'd like to think that I haven't affected his personality, because I think that's his own and ..... I mean, possibly ... if I hadn't got sick and I'd breastfed for a long time, and that possibly we'd be closer physically, like we do - he's not a very cuddly boy, but he is very - its not very often that I get cuddles (laughs). You know, maybe if I'd breastfed him for 6 months to a year, he'd - we'd be closer physically, and sometimes I moan to K. (friend), because .. yeah, he won't sit still long enough - at least he is - sometimes he does, he'd come up and gives me a kiss, like we are talking once a week, or if he's tired he'll like just to be happy to cuddle.

Further comments throughout the interview, such as "nappy change is the only real interchange when they are young" and "I should have played with him more" suggested that any future interventions should include strengthening of the caregiver-child



relationship. Unfortunately MMH care was to be discontinued, since Moira managed day-to-day living well and this MMH centre could not offer a follow-up parenting course. Additional findings from the interview and the other health agency were therefore not consolidated. Moira's case highlights the shortcomings of the New Zealand MMH system which does not foster the inclusion of infant mental health aspects into their treatment of the mothers.

The MMH worker had expressed concern about how well Sue (P#4) whose interview was classified as Balanced Restricted was able to care for her three months old child. Risk factors to optimal caregiving included long-standing mental health issues, the loss of her first child, continued episodes of severe depression, and a preoccupation with interpersonal difficulties with her birth mother with whom she had made contact only three years earlier. The intention of the interview was not to comment on the mother's state of mental health, but to ascertain if her own emotional difficulties interfered with her perception of her child's needs. The transcript indicated that Sue was able to separate her own problems from her role as caregiver. She could describe her child's character and the impact of her parenting on the child's development in a coherent discourse. The interview gave the MMH worker, who was also present, an insight into her client's caregiving ability. It suggested that while Sue needed the emotional support from her MMH worker, she managed to be sensitive to the needs of her children with the help of her husband, adoptive mother, and friends.

Judith's (P#4) transcript classified as Distorted Self-Involved illustrated that observation of caregiving behaviour alone might not always alert MMH workers to the degree of emotional risk factors the infants are exposed to. This particular mother, whose care with the MMH services was to be discontinued, was lovingly preoccupied with her five months old daughter. Her caregiving perceptions clarified the meaning of her intrusive behaviour as a dependency on her child for emotional well-being and comfort. An added insight into the mother's problems was the finding that she suffered from an irrational fear for her baby's basic health and safety which affected her behaviour towards the child. This case demonstrated that mothers in this service need to be supported in their role as caregivers after their own mental health problems have been addressed. This accords with the notion that health workers like therapists become a secure attachment base from which clients can explore new ways of interacting (Brisch, 2004). Because of her demanding work-load the MMH worker was unable to support Judith any longer. No steps were taken for follow-up sessions or the referral to another agency like Parents as First Teachers (PAFT) since the physical health of the mother and child were not at risk at the time of the interview.

Outcomes from Maree's (P#5) interview classified as Distorted Distracted together with the observation of disorganized attachment behaviour in one of the children informed the MMH worker, who had already identified concerns regarding the mother's caregiving behaviour, of the degree to which this had already impacted on her children. This mother was clearly worried about losing control and physically harming her children, but could not fully perceive how her caregiving behaviour was impacting on

her children's internal processes and emotional development. The MMH worker had no prior knowledge of the detrimental affect Maree's ambiguous caregiving behaviour already had on the children or how much her irrational fear of safety affected her interactions with them and her own emotional wellbeing. These additional findings were taken into account in the intervention program of this mother.

The mental health team had devised a long-term care plan of support for Lisa (P#6), since it was apparent that her mental health issues and home environment posed a risk to the as yet unborn child's physical safety. The interview indicated that this mother had not actually developed a perception of her child, and that the infant was expected to fulfil the mother's need of belonging and love. This drew attention to the additional risk of emotional and developmental problems in the child.

Findings from the last two interviews coded as Disengaged Impoverished were of particular interest, since both Abby (P#7) and Beth (P#8) were pregnant with their second child at the time of the interview and would be supported by their case worker before and after the birth. Their representations permitted an insight into the mothers' emotional distance from their child by which these transcripts were distinguishable. The MMH workers had not realised how little these caregivers understood (and therefore could not meet) their children's developmental needs. Disengaged caregiving behaviour was less obviously detrimental to the children's development than the intrusive behaviour of the mothers from the Distorted group. Based on outcomes from longitudinal studies on attachment and caregiving, the Disengaged interviews gave the

additional understanding to the MMH assessment that these children were at risk of emotional neglect and the formation of insecure attachments (Zeanah, 1993), since “variations of the same attachment and relational drama will be played out with the next child as well” (Brisch, 2004, p. 240) if the mothers’ own attachment dynamics do not change.

### **Useful Probes from the WMCI for the MMH Assessment**

The fourth aim was to evaluate if particular questions of the WMCI could be incorporated into MMH workers’ ongoing assessment to gain a better understanding of how well mothers appreciate their infants’ subjective experience.

Several groups of particular questions were found to point to distinguishing features in the caregivers’ narrations. Questions regarding the mother’s impressions about her child either in utero or after birth (question 1a and b, 2, 4, see Appendix 6) provided insight into how much the caregiver knew about her child – as opposed to her own needs - and how sensitive or aware she was to the needs and experiences of the infant. Five of the seven mothers interviewed after birth had difficulties relating to their child because they lacked an understanding of their children’s developmental needs for emotional closeness and dependency. Two mothers expressed their dislike of babies since they could not communicate with them. Following are examples which illustrate qualitative differences in how mothers answered some of these questions (in bold).

**1a. What were your impressions about the baby during pregnancy?  
What did you sense the baby might be like?**

(P#1) Ahm .... Like as in ... what he'd, like, did I sort of know his personality, like how he is now? Ahm .. not really, no. I didn't .. I imagined, but I didn't really .. ahm ... yea .. I suppose I thought he might be a bit .. have a strong personality, because me and (father) both have .. quite sort of strong good points and bad points (laughs). (P#4) I was more panicky about all the medications I was taking and is she going to be ok and normal ... ah .... (P#5) No. (P#6) Yea, I am glad it's a girl, because I wanted a girl, and I got a girl, so that's cool. Hm, but yea no, but I can't image what she will look like (laughs). I still can't imagine me pushing it out, so yeah (laughs). (P#7) .....

**Did you have any sense of what your baby might be like?** Bit of half and half, you know, wonder what it looks like and what it would be like. **Yea, because its only wondering at this time, isn't it.** Yea, and then you have the other half when you – where you don't really want it to come and you are dreading when it is going to be born and ... yea.

**1b. What was your first reaction when you saw the baby?**

(P#1) I was totally over the moon, I was just amazed, like just .. just couldn't believe that he was mine and beautiful and just looked at – like he looked at everybody, like my mum and dad were there and (father) and yeah ... just .. ahm .. he is beautiful. (P#2) Hm ... just overwhelmed- yea – just cried, yea, I was just so happy she was a girl (laughs). I mean I would have cried and been happy with a boy as well, but – yeah, it was just the best feeling. Just had a baby and to know that the pain is finished (laughs). That's probably the better feeling (laughs). (P#3) Just 'oh, my goodness, there is a baby'. I didn't – I didn't feel this overwhelming sense (laughs) of 'oh, my baby' and – no, I didn't feel that. I actually – yea, looking back – think we did lack a bit of bonding there. (P#7) I think all I wanted to do was to sleep. I just didn't want to look at the baby (laughs).

**4. What do you feel is unique about your child compared to what you know about other children?**

(P#3) Ahm .. (laughs) She's mine. Hm .. I don't know, I never thought of that actually. I don't know, I think about that as we go along. (P#4) With her age (nearly 6 months) what I find very different is how placid and relaxed she is, and she just doesn't seem to have a care in the world, as long as I am hanging out with my mum, I don't care. (P#8) I – I don't know, like sometimes I go – like when we are with other people and – I just, yea, I just look at it for what it is, but, you know, but now, you know, I cuddle him and think 'I don't know what it is, but, you know, like I couldn't feel like this about anybody else except you', you know like, like other kids, they are doing cute things, but .. I don't know what .. I guess, he is mine – he is ours ..... Yea, I know now that he has been talking more and communicating with us and I felt stronger ..... well ... ah ... but yea, I am not sure .....

Questions which enquired about the relationship with the child (question 6, 7, 11) were indicative of the intensity of psychological involvement in the relationship and the flexibility in the WM of caregiving, including an understanding of developmentally appropriate behaviour. Some mothers were not able to imagine how the relationship with their child had affected the child's personality. Instead, their narratives described their own needs and affective experiences.

**6. Can you give me some words which would describe this relationship you have with your child at the moment?**

(P#5) Ahm .... A bit disappointed ..... *begins to cry* ..... disappointed in my parenting ..... Its not what I used to be like with Chris (4 year old sibling of triplets). I feel like I am – like I am robbing all of them actually ..... I think back to the days when I was just with him. We'd go to play-centre together, we do all these things together .... *Still crying* ... yea, I just hope that they are not too affected by it later on, yea .... Their developmental skills, you know, and the learning stuff. (P#6) I find it quite special ... personal really, because no one else has the same .. ah . relationship that you have with your child. .... Ahm .. its quite .. ahm .. loving (laughs). You feel that, you know, you're needed and all the rest of it .. yea ..... (P#7) .... I think now its good .....**Good? Can you give me an example of something that has happened to tell you, “yes, I have a good relationship with my child”.** Hm .... Probably when you have – when she comes up for a cuddle and kiss and stuff like that. Now that she is older (inaudible) when she was younger she (inaudible) .....**Can you give me any other word to describe your relationship with her now?** ..... **Has it become easier?** Yea, now that she is older (inaudible) ....**What pleases you most about your relationship with your child?** ..... **What is the nicest thing?** ..... Well you already said something about, you know, that she comes up and kisses and cuddles you, so .....Yea, I just ... I don't know, I suppose I am just happy with her (inaudible). **Is there anything you wish you could change about your relationship with her?** Hm ..... I do have to remind myself that she is only 3 and not yell and scream ... because our mum yelled at us and that's used to scare us to death ... so I have to really remind myself I don't want to do what my mum did to us ... I've got to remind myself ... it is hard for me ..... I've constantly to remind myself not to yell and stuff too

much, because I know how much I hated it ... so ..... I don't want her – I don't want her to think of me what I think of my mum (laughs) .....

**7c. Has the relationship to your child changed at all over time?** (P#3) Yes, I like her more now (laughs). I don't – I have decided I am not a baby person, I am definitely more - when they can do things and – I like that fact that she is independent. That is good. (P#4) Its only grown .. ah .. so much more. I don't know how to describe it really, other than basically want to give her lots of kisses and hugs.

Question 11 asked if mothers felt that any particular experiences might have been a setback for their child, and would they do anything differently if they could if they could start again. Answers to these questions were thought to be helpful in the planning and implementation of interventions, since they can provide an insight into the mother's ability to see the caregiving relationship from her child's point of view.

**11. Are there any experiences which your child has had which you feel may have been a setback for your child?** (P#1) Hm ... No. No, I don't think so. **And why do you think so?** Hm ... Because even though I wasn't there for him, (father) was, even he is his dad. It might have been different if I was a single mum and he had to go to foster care or something. But I think, yeah, I think ... **So if you could start all over again, would you do anything differently?** I suppose ... sometimes I'd not do – I'd not clean the house and I'd just sit down and play with him more. I sort of have gone through stages of ... I sometimes just want to get that tea done and that before Chris gets home, and I just ... yeah .... But I mean, I don't know, but really should (?) more (voice nearly inaudible). But that is nothing major so, oh, apart from smoking (marihuana) when I was pregnant (laughs), because possibly, if I hadn't smoked – but, I don't know ..... It made me change my ways, it made me – a lot of what I said that night and did that night was real self-loathing, like, I think I just felt so guilty and .. and I couldn't get away with it, so (laughs) – And I feel that magnified it, if that wouldn't have happened, I would possibly be still smoking pot, you know, not during the day and that, but you know ....

**Are there any experiences which your child has had which you feel may have been a setback for your child?** (P#4) Yes, when she rolled off the bed, because she would not roll for ages after. **So if you could start all over again with your child, would you do anything differently?** ..... ah .... Only the



booze, silly thing (nearly inaudible). I mean, I have been told by so many people 'you are so lucky you have had your baby in the hospital, because she wouldn't be here today otherwise. So I always say, 'if you want to have a natural birth, fine, just do it in hospital'. **So when I say 'would you do anything differently' you are actually talking pre-birth then, are you?** That was for labour. That is what I would advice anybody. And that is – the only thing is, I would be more ..... when ... because they took her off the monitor, and that's one thing that I would have said was, 'put me back on it now that I have been to the toilet. Bring me – put me on, so you do not loose her heart beat (?), because if you knew you couldn't hear her heart beat .. ah ... if you couldn't hear her heart beat then why did you leave her such a long time. Because, again, yeah, fortunate .. she seems intelligently equal, but she might not have. Something could have happened and ... the rest of her life, yeah, to look after an ill child. So that's one thing I would be very staunch about.

**11. Knowing what you know now and you could start all over again with your child, what would you do differently? (P#8)** Yea, I would definitely be renting or whatever. And that is what I keep thinking with this pregnancy, and I worry that – and after so long – I worry that if I have this baby and I get depressed – and I keep on thinking 'this time it's going to be so different'. I'll be pregnant in my own home and I'll be able to set up a baby-room that sort of thing ....Yea, we just put us both under such a lot of pressure and that, you know, and that's why we thought we trying and reduce – all pretty much, you know, that's why I went back to work, trying to get some bills out of the way, you know, the cards and that sort of thing and that is one less thing to worry about. Yea, make sure – most of the house is finished now, it's only the grounds to do which isn't too tricky – I just wanted to reduce as much stress as we could. So I guess, if we could do Victor's time all over again, we either could not have had him at all at the time we've had him (laughs), or not have build the house, you know. It was just too much.

Further, question 12 identified mothers who had an extreme and irrational fear or worry about their child. This was found to distort the representation of the infant and affect the relationship with the child.

**12. Do you ever worry about your child? (P#4)** When she is asleep, I worry. I worry that she is not going to wake up. I worry that I am going in there and that she is blue. I worry that when she eats, she is going to choke. But I keep saying to myself, just stop worrying about things like that, but my brain just keeps going over and over and over. I find that now that I am on the right dosage for medication, I don't get it as much, but if I'm not on it, then I



start – or if I forget to take it that day, then the – its like a broken record. It just goes over and over and over the same things. And that happens with my relationship as well. Lee (?) I think, and that didn't sound quite right- yeah, over and over and over. That's one thing I hate about my depression, is, 'would you just shut up' (laughs). Yeah, with bad sort of thoughts, I wish they would just go away sometimes.

In sum, results suggest that findings from the WMCI were able to give MMH workers additional insight into issues of attachment difficulties and the child's subjective experience of the caregiving relationship. Outcomes emphasised that the lack of insightful or sensitive caregiving over time needs to be taken into consideration as a risk to infant development and infant mental health together with the prevention of physical harm to the children. While the three main classifications and their sub-types were found to relate to particular clinical distortions, specific scores on the subscales alerted to domains of strength and weakness of the mother-infant relationship.

## **Discussion**

### **Summary of Findings**

The principal goal of this study was to explore if certain probes of the Working Model of the Child Interview (WMCI) (Zeanah et al., 1996) could add to findings from the routine assessment by maternal mental health (MMH) workers. More specifically, this research explored if subscale scores of this instrument would point to qualitative differences in caregiving perceptions and indicate particular risk or protective factors related to infant development. A third and related aspect was to discuss how the findings could be incorporated into the intervention programme of the MMH service, so that early signs of children's unmet needs can be recognised.

Consistent with previous research (Huth-Bocks et al., 2004a; Wood et al., 2004) maternal mental health issues interfered with the mothers' ability to fully appreciate how their children might experience the caregiving relationship. As expected, differences in subscale scores were directly related to clinically relevant distortions of mothers' representations of their children. Classifications were indicative of mother-child interactions, the attachments of these children and the effect on their development. Mothers in the Balanced group were able to interpret infant cues and respond to their children's needs in a sensitive manner. Transcripts rated as Distorted indicated that these mothers were overinvolved/intrusive in their caregiving, and in one case this was mixed with uncontrolled anger. Mothers in the Disengaged group showed a distinct lack

of emotional involvement with their children. Of particular interest was the outcome of this study which suggests that certain questions from this interview could be used by MMH workers to identify the impact of the mothers' mental health problems on their children. The hypothesis that timing and severity of PPD as well as multiple risk factors would impact on mothers' representations was only partially supported. Although these findings were based on a relatively small number of mothers ( $n = 8$ ), they alert to the importance of incorporating aspects of infant mental health into MMH care.

### **Service Providers and Participants**

Referrals of mothers to the MMH service in New Zealand are mainly concerned with the mother's mental health issues (Adult Mental Health Services, 2001). It became apparent during this research that there are significant differences in how MMH centres operate. Some service providers take only mothers without a history of previous mental health issues, while most MMH workers care for women with severe and often long-standing clinical problems. Support workers might have to carry the workload alone or are part of a bigger team, involving psychologists and psychiatrists. This will, of course, impact on the amount time MMH workers can invest in each case and the scope of the care.

Given the nature of the MMH setting, it was difficult to find mothers willing and stable enough to be involved in this research. This meant that most participants had already made considerable improvements at the time of the interview, in itself a testimony to the

valuable service provided by MMH workers. Four caregivers had come to the end of their time with the MMH service. In the light of resulting classifications this was an important factor, as discussed below. Two mothers had been in the care of the mental health system for many years and would receive continuing mental health support once their involvement with the MMH service discontinued.

The major aim of this study was to provide an insight into caregiving perceptions and it was not expected that the interview would discover risk for infant development through global abuse or neglect which had been overlooked by the MMH workers. Zeanah and colleagues (1995) have emphasised that the WMCI should only be seen as a component of a clinical assessment and is best used in conjunction with behavioural observations.

The disparity of the clients in this service was reflected in the diversity of the sample. Not only were participants at different stages in their treatment, the sample also included two mothers who were pregnant with their second child, one pre-birth interview, and one mother who has had a multiple birth. Questions of the WMCI were modified for the use of the pre-birth interview (adapted from the research by Huth-Bocks et al., 2004b). No previous data describing the use of this instrument with more than one target child could be found. A decision not to eliminate the narrative of this mother was due to the purpose of this study being to investigate the use of the WMCI in a typical clinical setting in the New Zealand context.

While it is undoubtedly important to support the mothers first and address their mental health issues as a priority, the data from this study emphasise the need for an integrated approach in the assessment and treatment of caregiver *and* infant. All MMH workers involved in this research had some understanding of attachment theory and its practical implications, but they did not assess attachment related concerns by asking certain questions that could offer insights into the attachment dynamics of the mother-child dyads.

### **The Impact of Post-partum Depression on Representations of the Child**

Numerical coding of the WMCI's subscale scores indicated the varying degree to which caregivers were able to perceive the individual needs of their children and the impact they had as caregivers on their development. These scales were used to assess qualitative (or formal, organizational characteristics of the discourse), content, and affective features of the representations. The overall classifications of the eight transcripts into Balanced, Distorted, and Disengaged transcripts and their sub-classifications were based on the meaning of these subscale scores. WMCI classifications distinguished between varying risk status of different mother-infant dyads and their implications to caregiving without specifically identifying mothers' or infants' clinical problems.

### **Perceptions Coded as Balanced**

Since more chronic and severe maternal mental health problems are often associated with disturbed or less sensitive caregiving (Atkinson et al., 2000; Oyserman et al., 2000), it was expected that the representations in this sample would be less likely classified as Balanced. However, three of the eight transcripts did fall into this category. A possible explanation for this as mentioned earlier, is the fact that two of these mothers had already received ongoing care and support of a MMH worker for several months prior to the interview. Age of the children also meant that they were able to speak in hindsight about their initially difficult first year and PPD/PPP after birth. This was supported by their comment that their responses to the questions would have been very different if interviewed several months earlier. While none of the interviews met all of the criteria for the subtype of a fully Balanced representation, mothers in this group were, in line with previous research (Benoit et al., 1997; Huth-Bocks et al., 2004a), able to describe their children in a coherent and sensitive way. They could provide examples to support their statements, and their psychological involvement in their caregiving role was expressed by their joy and pride in their children. The comment “I have never thought about that before” from two mothers in this group and their off-tape questions regarding this research were indicators of their willingness to accommodate new information about the child and their role as caregivers. Examples of coherency from transcripts coded as Balanced included the integration of a traumatic experience into the discourse and the acknowledgement of caregiving difficulties which the mother was able to put into context (Main, 1991). Restrictions to a fully Balanced transcript included a moderate distance from a full involvement in the caregiving relationship

which lead to diminished caregiving sensitivity and additional hints of role-reversal in one of the transcripts.

### **Perceptions Coded as Distorted**

The characteristic of discourse that particularly differentiated Distorted from Balanced representations in this study was coherence. These mothers found it more difficult to stay with the topic, and when asked questions about their children they often talked about their own issues. Clinical distortions in the mothers' perceptions of their children included a lack of insight and sensitivity. One transcript revealed aspects of role reversal. The mother used interactions with her baby to regulate her own affect and, as Brisch (2004) called it, as an "attachment-antidepressant" (p. 154). This correlates with a study by Radke-Yarrow (1995) which showed that some mothers with severe depression increased their affective interactions with their babies when distressed. These caregivers may seek comfort from their child (Murray & Cooper, 1997), and the infant seems to exist in order to satisfy the need of the caregiver (Zeanah et al., 1996).

Transcript scores and classification from the caregiver with multiple births were not indicative of how this mother perceived each individual child, but gave an insight into the caregiving relationship. She was frustrated with a caregiving situation (not the actual children) in which she could not give each individual child the care she knew they needed. This insight was not integrated into her discourse though, and the transcript conveyed a lack of insight into the impact of her caregiving behaviour on her children's development.

### **Perceptions Coded as Disengaged**

Interviews classified as Disengaged generated the most homogenous narrative features in this sample. All three showed the mother's lack of insight into the child's motives and intentions, and answers that required a judgment about the inner life of their children were minimal. Their narratives lacked coherence since these caregivers found it difficult to focus on the child and to provide specific memories. This was in accordance with Oppenheim's (et al., 2002) findings that mothers classified as disengaged know very little about their children's emotions and prefer to talk about their behaviour. Adults classified as Dismissing on the AAI follow a similar response pattern and an organisation of thought that permits attachment to remain relatively deactivated (Main et al., 1985; Zeanah, 1993). In particular what appeared salient in mothers coded as Disengaged was the restriction of affect and flat tonality commonly associated with characteristics of depression and detachment.

### **Interactions of Risk and Protective Factors on Maternal Perceptions**

In the assessment of risk factors to parenting, multiple determinants and their interaction with the mental health issues of the mothers must be considered. Although it was not within the scope of this study to explore variables such as infant temperament and economic disadvantage, observations during home visits and off-tape comments led to the understanding that financial concerns posed an additional risk factor to parenting and mothers' mental health for three of the participants (Balbernie, 2002). Answers to



the WMCI question about infant difficulty clarified that only one mother in this sample perceived her child's temperament as difficult.

Results were only partially consistent with the hypothesis that severity of PPD and long-standing mental health problems prior to the birth of the child would lead to more pronounced clinical distortions of maternal perceptions. One of the transcripts coded as Balanced came from a mother who had severe mental health issues during her lifetime and suffered the loss of a previous child. Her ability to form a relationship with her infant with little sense of constriction could have been a function of protective factors, such as a strong social support system, for this mother-infant dyad (Goodman & Gotlib, 1999).

In line with previous research findings (Elgar et al., 2004; Goodman & Gotlib, 1999; Lovejoy et al., 2000; Teti et al., 1995) timing and severity of PPD was found to be a moderating factor for seven of the transcripts. At the time of the interview depressive symptoms for the remaining two mothers in the Balanced group appeared to be less severe and less of a hindrance to their parenting interactions with their children. These mothers could also draw on the support of a husband/partner who actively participated in the role of caregiving, as well as extensive help from family members. Mothers whose perceptions had been rated as Distorted had chronic mental health problems prior to the birth, followed by severe PPD. Additional risk factors impacting on the quality of parenting in this group were multiple births for one participant, and sexual abuse as a child together with partner problems and insufficient social support for another.

Interactive influences on maternal mental health and subsequent maternal perceptions of their children in the Disengaged group included long-standing mental health issues, teen-age pregnancy, multiple symptomatology, and marital problems combined with a felt lack of marital support.

### **Social Support**

Maternal attachment experiences and working models formed through childhood are thought to affect perceptions of support (Huth-Bocks et al., 2004a), help seeking attitudes, and the maintenance of close relationships (Priel & Besser, 2000). Results revealed that all mothers who had Balanced perceptions of their children reported strong husband/partner support in their caregiving role and marital satisfaction. One of the mothers from the Disengaged group who related support in parenting from her present partner, was living with her family throughout her pregnancy of the target child and for two years following the birth. While she perceived this support as available, she did not describe it as satisfying. Marital difficulties and the husband's own mental health problems led to an increase in stress for a second mother from this group. Children who have two parents with mental health issues, as well as marital problems, have found to be at significantly greater risk for affective disorders later in life (Goodman & Gotlib, 1999), but the mother's description of her husband as a sensitive and devoted father suggests that he plays a protective role for the child (McCurdy, 2005) and moderates the mother-child interactions. The lack of a stable support system was evident in the teen-age pregnant mother's expectation of support from a boyfriend of two months. Both mothers in the Distorted group did not feel supported by their partners in their role as a

caregiver. This has been found to intensify the impact of maternal mental health problems on outcomes of child development (Herwig et al., 2004; Huth-Bocks et al., 2004a). The mother of the triplets depended on the help of the part-time nanny since the birth of the children. Formal support, such as MMH service, GP, or Plunket nurse, was not rated as more supportive than the informal support network of family and friends by any of the mothers.

### **Additional Findings from the WMCI to the MMH Assessment**

The interviews were conducted with the intention to share additional findings with the case workers, so that the research could benefit the intervention approach with the participants. MMH workers were provided with confidential reports which were summaries of observed interactive behaviour, the mothers' ability to interpret their child's subjective experience, understanding of emotional and developmental needs, and concerns of support. MMH assessment and interventions are directed at the mother's mental health issues and risk factors to the physical safety of the child. As expected, an assessment of clinical distortions in the mothers' perceptions pointed to caregiving behaviour that identified early signs of attachment related difficulties and risk to the children's social/emotional development. One of the MMH workers commented that the additional findings for some of these mothers had given her a much more detailed account of dyadic relationship problems which she had "suspected, but had no way of measuring" (personal communication, 2005).

The outcomes from the interviews gave MMH workers added understanding into the mothers' appreciation of their children. Six out of seven caregivers in the present study (excluding the pre-birth interview) lacked insight into the emotional and developmental needs of their children to a varying degree. Mothers in the Balanced group responded to a wide range of their children's needs. The caregiver who had the most severe and long-standing mental health problems in the Balanced group and who had experienced the loss of a previous child, was found to be particularly sensitive and aware of her infant's individual needs, even though the child was only three months old. This outcome was unexpected, and assured the MMH worker, who was present during the interview, that the mother's mental health issues did not interfere with her caregiving abilities.

Distortions of perceptions in the Balanced group included encouragement of independence at the cost of dyadic closeness (including a lack of verbal interactions). This finding helped to explain the child's developmental delays and that these might not stem solely from the mother's mental health issues. While the MMH worker could appreciate this finding, her workload (and job description) did not allow interventions directed at the mother's relational interactions with her child. Additional findings from the interview coded as Distorted Self-Involved could not be acted upon for the same reasons. The MMH worker was not aware of the mother's dependency on her infant for comfort and affect regulation in what Zeanah (1993) called "a role-reversed relationship pattern" (p. 131), since mother-infant interactions (the mother called these "therapeutic") could be observed as intense and joyful. The transcript was characterised by the caregiver's preoccupation with self and her own unresolved attachment

experiences together with an irrational fear for the child's health and safety. This is consistent with the role-reversing parenting typically reported in AAI interviews classified as unresolved/disorganised with adults who have had traumatic experiences (Solomon & George, 1999). These additional findings raise concern for future caregiving responses to the child's growing need for exploration and autonomy and suggest that the mother (whose care with the MMH service was to be discontinued) and her child would benefit from ongoing support of some kind, especially since the partner was not considered a support in the caregiving process. In this case a second attachment figure, who could encourage the child's exploration, would act as a protective factor (Brisch, 2004).

Even though the MMH worker of the mother with the triplets had considered the physical safety of the children as part of her ongoing assessment, she was not fully aware of how much the mother's caregiving behaviour had already impacted on their emotional development. The unpredictability of this caregiving environment is best described by Radke-Yarrow's (1995) observations of severely depressed mothers who had "some redeeming moments of joyful interactions" (p. 124) in between episodes of anger. This form of caregiving presents the child with a paradox and has been found to lead to a disorganisation of the child's cognition and behaviour (Hesse, 1999). During the interview the researcher observed one of the target children engaged in behaviour which could be described as 'disorganised' with regards to their relationship to their caregiver (Main & Solomon, 1986). The child approached her mother sideways, 'froze' on the spot several times, and then backed into her. She also displayed self-harming

behaviour as she repeatedly rocked forwards and backwards on her stomach and banged her face against the floor while crying. These behaviours had not been previously observed by the MMH worker, quite possibly since home-visits had been replaced by the mother's attendance of the MMH parenting program. The additional insights from the transcript - themes of inadequacy as a caregiver and loss of control, together with an irrational fear of loss – led to the continuation of individual support from the MMH worker and further funding from the government for the nanny.

The pre-birth interview showed that this mother had not even formed a schema about her baby. It is quite possible that the mother's inability to form a representation of her as yet unborn child is due to her diagnosis of BPD traits. The WMCI is not a diagnostic tool (Benoit et al., 1997), but based on previous research outcomes on BPD and caregiving (Espinosa et al., 2001; Oyserman et al., 2000) the interview implied that this infant-mother relationship needs to be considered a risk factor to the child's attachment security and later socio-affective functioning. Feedback to the MMH worker included the proposal that interventions, which were directed at the mother's mental health issues and the physical safety of the child, should incorporate aspects of maternal sensitivity training before and/or after the birth of the child.

Findings from the interviews classified as Disengaged alerted the MMH case worker to the degree of maternal disengagement from the emotional involvement with their children. The transcripts highlighted that even though these mothers were not currently as severely depressed as they had been after the birth of the target child, their children

continued to be affected by the subclinical maternal distress (Atkinson et al., 2000). Both mothers remembered their difficulties to feel close to their children after birth and to interpret infant cues, and their insight into their children's subjective experiences two and three years after birth was still minimal. Even moderate levels of depression have found to interfere with sensitive and responsive caregiving in mothers with a dismissing adult attachment (Adam et al., 2004). Since these two participants were pregnant at the time of the interview, this was of particular importance to their MMH worker who had an understanding of attachment theory and its implications to child development. She incorporated the new insights into the planning of support for the mothers and their new babies.

### **Implications of Findings for MMH Care**

The focus of this study was to identify clinically relevant distortions of the infant-caregiver relationship which would give MMH workers an added insight into the assessment and treatment of the mothers in their care. Specific questions of the WMCI alerted to problems related to caregiving. These could be incorporated into the MMH workers' assessment, without adding to their already considerable workload. To include a focus on aspects of the child and provide information about the mother's state of mind, which would indicate a risk to her child's attachment security, routine questions could be made more specific. For instance, enquiries about the mother's pregnancy and birth during the assessment interview would include additional probes, such as "what were your impressions about the baby during pregnancy" and "what was your first

reaction when you saw your baby?" (Q.1 of the WMCI). These can provide critical information for an early identification of distorted perceptions of the child and where to guide interventions. Child related questions also "send a message to the caregiver about the importance of the infant and the caregiver's thoughts and feelings about the infant" (Zeanah et al., 1997, p. 191).

Outcomes of this research suggest that an assessment which includes a developmental theory of risk will lead to interventions that emphasize improving quality of mother-infant interaction and attachment, a parent's sense of competence, as well as mothers' mental health. While interventions for maternal depression will undoubtedly enhance functioning in both mothers and children, intervening changes in the quality of parental care are seen as the primary vehicle to foster the child's mental health (Brisch, 2004; Solomon & George, 1999; Koren-Karie et al., 2002).

Even though the perspective of MMH workers involved in this study on attachment theory and its implications for risk of infant attachment had been broadened, it was not always possible for these workers to follow up research findings or even their personal 'hunches' (personal communication, 2005). In clinics where MMH workers do not have the support of a multidisciplinary team, issues regarding aberrant parent-child interactions, such as intrusive or disengaged parenting behaviour and early signs of attachment difficulties, are most likely not implemented into the care of their clients. These aspects of infant mental health, aside from the detection of physical abuse and neglect, have not been incorporated into the job description of the New Zealand MMH



system. This coincides with Nightingale's (2001) findings that the treatment of mothers in the New Zealand mental health system does not include the aspect of their caregiving or risk factors to the children's development.

With regard to clinical practice, a basic understanding of the implications of attachment theory would need to be implemented into the training of MMH workers in order to include probes from the WMCI into their assessment. MMH workers who participated in this research were aware of attachment related issues, but did not have the means to assess the "degree that these were a problem" (personal communication, 2005). A shift toward prevention and early intervention does not call for "the creation of a new system but rather infusion of infant mental health practices throughout current programs" (Graham et al., 2001, p. 20). Similarly, attachment theory can be integrated into other approaches of therapy, since attachment is seen as a "fundamental interpersonal motivation in all relationships, both therapeutic and otherwise" (Brisch, 2004, p. 248).

### **Strengths and Limitations of this Study**

The present study provides a contribution to findings on the pre- and post-natal use of the WMCI with a high-risk population. There have been no prior studies in New Zealand reporting the role of maternal representations as a mediating factor on child outcomes in a clinical setting. Certain probes of this instrument provided MMH workers with additional information to their own assessment about the mother-child interactions and added a focus on the psychological needs of these children. It is also encouraging

that results of the present study were consistent with those of earlier research with this instrument.

A limitation of this study is its small sample size, but the willingness of the MMH workers and mothers to participate in this study provided information that could not be obtained from a large sample with survey questions. This type of research can only be done with large samples if the study is incorporated into a mental health facility of some size and with the help of a team of researchers as in previous studies using the WMCI (Benoit et al., 1997; Huth-Bocks et al., 2004b; Wood et al., 2004; Zeanah et al., 1997).

Further limitations are noted in the present study by overrepresentation of Pakeha mothers and caregivers with a relatively strong support system. The sample is a convenience sample, exclusively comprised of mothers who volunteered to participate. MMH workers only approached those clients in their service which they deemed well enough to be interviewed. As mentioned earlier, most of these mothers were ready to be discharged. Therefore the study is subject to limitations of this type of sample including the inability to accurately generalise to the MMH population at large (Dunham, 1988).

### **Future Research**

Future research with the WMCI in a MMH setting could concentrate on following a small number of case studies over time. It would be of interest to evaluate possible

changes in the mother's working model of the child and the relationship between the mother's mental health and the trajectory of the child's development.

To address the moderating factor of social support on maternal perceptions, future research should replace the self-report questionnaire used in this study with a direct assessment of the quality of perceived support. Open-ended questions regarding what mothers find most helpful and supportive (or a hindrance) in their role as caregivers would give a more in-depth understanding of the mothers' unique experiences and provide useful information for treatment planning. Some off-tape comments from the mothers in this sample referred to criticism from their own family members and the negative affect of felt social expectations of what a 'good mother' does. These notions did not manifest in the scoring of the self-report scales.

Relationship assessment ideally combines direct observations of parent-child interactions with the evaluation of subjective experiences of infant and caregiver (Robinson, 2002; Stern-Bruschweiler & Stern, 1989; Zeanah et al., 1997). Future research with mothers involved with the MMH system could develop a short formal assessment of how mothers shift their attention between monitoring their child(ren) while at the same time attending to a visitor and a task. Attachment behaviours are thought to be most prominent in situations which include a moderate amount of stress (Weinfield et al., 1999). In the present research relevant information was gained from observing caregiver-child interactions even though this study did not include the aspect of a behavioural assessment.

## **Conclusion**

Outcomes from this research gave MMH workers an added insight into maternal perceptions and caregiving behaviour and were in accordance Huth-Bocks' (et al., 2004a) finding that risk to infant development is indirectly related to infant-mother attachment through its effects on the mother's caregiving behaviour and way of thinking about her child. As predicted, mothers whose transcripts were rated as Balanced had more insight into their children's subjective experience and were more responsive to their developmental needs than mothers whose representations were classified as Distorted or Disengaged. When considering the clinical implications of the strong link between caregiving perceptions and later infant attachment security (Benoit, et al., 1997), infants whose mothers had Distorted and Disengaged transcripts were thought to be at increased risk in their social-emotional development.

Classifications were based on particular thematic and narrative features like the affective tone of the mothers' representations of their child and were found to be indicative of particular risk and protective factors to the dyadic relationship. Results suggest that specific probes from the WMCI could be usefully incorporated into the MMH assessment procedures, and this would give MMH workers who were familiar with attachment theory valuable information for devising appropriate interventions.

As the present study has little material available for comparison, it must be viewed as an initial step into the research on the use and effectiveness of the WMCI as an assessment

instrument in the MMH setting. While an awareness of attachment theory and research seems to be growing, it needs to be more firmly recognized and implemented into the education and training of MMH workers.

Limitations acknowledged the present study provides an insight into the transmission of internal working models and into the interactional processes that reflect maternal mental health and infant functioning. Mental illness, in particular post-partum depression, is a very real issue affecting the lives of New Zealand mothers and the children in their care. One of the clearest implications of this research is that a focus on maternal depression alone may be inadequate to explain variations in patterns of caregiving and dyadic interactions, and a more integrated approach to assessment and interventions in a MMH setting would include aspects of infant mental health to prevent the risk of long-term negative consequences associated with aberrant parent-child interactions.

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## **Appendix 1A**

[Massey University letterhead]

### **Mothers' Representations of their Child in a Maternal Mental Health Setting in New Zealand.**

#### **Information Sheet**

(for the Maternal Mental Health workers)

You are invited in your capacity as the Maternal Mental Health worker to participate in a study investigating how mothers in a clinical setting think and feel about their children. This research is part of a master degree in psychology and has received ethical approval from the Massey Ethics committee.

**Background:** Little is known about mothers' perspectives of providing care for their infants at a time when mental health problems add to the challenges of adjustment after the birth of a child. Research shows that a mother's conceptions of her infant will influence her caregiving behaviour. Gross misconceptions have often been found in a clinical population and increase the risk of a healthy infant development and later socio-affective functioning. The Working Model of the Child Interview has been designed to find out how mothers perceive their children's personality and development and what is special about their relationship with their child.

**The aim of this study:** It is hoped that the findings of this study will point to particular problems in mother-infant relationships which will not have been uncovered by



standard assessment procedures. The knowledge of these problems is expected to allow mental health workers to include the needs of the infants, who are often already compromised at birth, in the therapeutic care of the mothers.

**What the study will involve:** Eight mothers involved with the Maternal Mental health Program in Napier will be asked to participate in an interview that has not been used before in New Zealand, but has been designed to assess mothers in clinical settings in the United States. During her initial visit the health worker will ask permission from the mothers to be interviewed in their own home and at a time convenient for both the mother and the health worker. The worker will explain the research particulars on the information sheet with the mothers and ask them to sign the consent form if they wish to participate. Clients will be assured that there is no compulsion to participate. The worker will also fill out the sheet with demographic data and diagnostic description of the client. Clinical data is disclosed only between the worker and the researcher and will solely be used for an interpretive analysis of the research outcomes. Client confidentiality is assured.

If consent is given, the researcher will accompany the health worker at the second (or third) home visit. Interviews should take between one and one and a half hour and have to be conducted only once. Interviews will be audio-taped, transcribed at verbatim, and rated with the use of a coding manual by the researcher. The maternal mental health worker's assessment and the findings of the study will be compared to find out if any extra knowledge regarding an understanding of the situation (e. g., safety, treatment approach) has been gained. Participants who are interested in the study's findings will be given the option to receive a brief summary either by their health worker or the researcher and health worker.

Time involvement for the health worker is expected to be between 2-3 hours for every participant in this study, but it is hoped that this involvement will be beneficial to the assessment of the client and the ensuing treatment planning and outcomes.

**What to do if you wish to participate:** Your participation in this study is entirely voluntary. If you do take part in this study, you retain the right to:

- Ask questions about the study
- Contribute to the study's qualitative outcome
- Discuss particular findings

If you wish to participate, please complete the consent form. This form simply confirms that you have read and understood the information about this study, and that you have agreed to participate.

**Project Procedure:** Confidentiality is assured. Your name and place of work (the wording "Maternal Mental Health unit" will be used without clarifying that it is situated in Napier) will not be used in any of the reports or published material on this study. Taped transcripts of the interview will be reviewed by one supervisor of the project, Sue Watson (Massey University). Data will be stored under secure file at Massey University for five years, after which they will be destroyed. Computer data will be password protected. You can request a copy of the summary of these findings.

Permission for this study has been sought by your supervisor and Clinical Leader of the Mental Health Unit in Napier, J. C., and R. P. of the Maori Health Unit has been informed of this study as a part of the consultation process with the tangata whenua.

**Who to contact for further information:** If you wish to discuss any further aspect of this study, or if you have any concerns or queries, please contact:

The researcher: Andrea Hannah, phone: [REDACTED] email:

[REDACTED]

University Supervisor: Ian Evans, School of Psychology, Massey University, email: [i.m.evans@massey.ac.nz](mailto:i.m.evans@massey.ac.nz)

University Supervisor: Sue Watson, Department of Health & Human Development, Massey University, email: [S.A.Watson@massey.ac.nz](mailto:S.A.Watson@massey.ac.nz)

## **Appendix 1B**

[Massey University letterhead]

### **Information Sheet**

(for the participants)

To: Mothers involved in the Maternal Mental Health System

Hi,

My name is Andrea Hannah and I am a postgraduate Psychology student at Massey University.

I am researching how mothers think and feel about their children. Up to now no research of this kind has been done with mothers involved with Maternal Mental Health in New Zealand. I hope that my study will help us to understand mothers' perspectives of providing care for their infants at a time when mental health issues might add to the challenges of adjusting to the birth of a new child.

I will be using an interview which has been developed for finding out how mothers perceive their baby's personality and development. This interview will take place in your home (unless you would prefer a different setting) and at a time convenient for you. Your support worker will be present during the interview. The interview will be audio-taped and confidentiality is assured. This means that no material which could personally identify you, such as name and address, will be used in my research report.

Thank you very much for showing an interest in this study. I am looking forward to meeting you,

Andrea Hannah

## **Appendix 2A**

[Massey University letterhead]

### **Consent Form for MMH Workers**

The Working Model of the Child Interview: Assessing Mothers'  
Representations of their Children in a Clinical Setting.

### **Consent Form**

(Note this consent form will be held for a period of five years)

I have read the information sheet, and I have the details of the study explained to me.  
My questions have been answered to my satisfaction, and I understand that I may ask  
further questions any time.

I agree/not agree to support the researcher of this study and to participate under the  
conditions set out in the information sheet.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name (printed): \_\_\_\_\_

## Appendix 2B

[Massey University letterhead]

### The Working Model of the Child Interview: Assessing Mothers' Representations of their Children in a Clinical Setting.

#### Consent Form for Interview

(Note this consent form will be held for a period of five years)

**Please indicate whether or not you agree to the four provisions described below, and then sign this form.**

I have read the information sheet, and I have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

**do not agree** (DELETE ONE) for the interview to be audio-taped.

**do not agree** (DELETE ONE) for a written summary of the interview to be shared with the Maternal Mental Health worker.

**do not agree** (DELETE ONE) for diagnostic information to be disclosed between the Mental Health worker and the researcher.

**do not agree** (DELETE ONE) to participate in this study under the conditions set out in the information sheet.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Full name (printed): \_\_\_\_\_

## Appendix 3

[Massey University letterhead]

### Letter to the Maori Mental Health Worker

Maori Health Unit,  
Hawkes Bay District Health Board  
[REDACTED]  
Napier

The Hawke's Bay Ethics Committee has asked that I inform you that I am planning to undertake a qualitative research during October 2004 and March 2005 at the Maternal Mental Health Unit in Napier. As the study may involve Maori women the Ethics Committee requires that I advise you as part of a consultation process with tangata whenua.

I will be investigating how mothers perceive their children's development and personality and to what extent mental health problems might affect the infant-caregiver relationship. Research shows that a mother's conceptions of her child will influence caregiving behavior. Gross misconceptions (e.g., they might have developmentally unrealistic expectations or fail to experience the child as a person in his/her own right) have often been found in a clinical population of mothers and increase the risk of healthy infant development and later socio-emotional functioning.

My research will involve the use of an hour long open-ended interview, the Working Model of the Child Interview by Barton, Benoit, & Zeanah (with permission of the authors), which will be audio-taped and transcribed verbatim. The interviews will be conducted in the presence of the Maternal Mental Health worker who is in contact with the participants.

I would be grateful for your written acknowledgment, suggestions/advice on this matter.

If you have any questions please feel free to telephone me on [REDACTED]

Yours faithfully,

Andrea Hannah

## **Appendix 4**

[Massey University letterhead]

### **Letter to Mothers of the MMH System**

To: Mothers involved in the Maternal Mental Health System

Hi,

My name is Andrea Hannah and I am a postgraduate Psychology student at Massey University.

I am researching how mothers think and feel about their children. Up to now no research of this kind has been done with mothers involved with Maternal Mental Health in New Zealand. I hope that my study will help us to understand mothers' perspectives of providing care for their infants at a time when mental health issues might add to the challenges of adjusting to the birth of a new child.

I will be using an interview which has been developed for finding out how mothers perceive their baby's personality and development. This interview will take place in your home (unless you would prefer a different setting) and at a time convenient for you. Your support worker will be present during the interview. The interview will be audio-taped and confidentiality is assured. This means that no material which could personally identify you, such as name and address, will be used in my research report.

Thank you very much for showing an interest in this study. I am looking forward to meeting you,

Andrea Hannah

**Appendix 5**

**Demographic Data**

(to be filled out by the Maternal Mental Health Worker)

Mother’s Age at Birth of Target Child:

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Age of Child:

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Child’s Birth Order:

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Married/Partner: \_\_\_\_\_ Single: \_\_\_\_\_

Support Person(s): \_\_\_\_\_

Ethnicity: \_\_\_\_\_

Diagnostic Description:

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Time of involvement with MMH service:

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## Appendix 6

### The Working Model of the Child Interview: Assessing Mothers' Representations of their Children in a Clinical Setting.

#### **Working Model of the Child Interview Questions**

Zeanah, C.H., Benoit, D., & Barton, M. (unpublished document, used with permission)

1. I'd like to begin with you telling me about your child's development.

Let's start with your pregnancy. I am interested in things like whether it was planned or unplanned, how you felt physically and emotionally, and what you were doing during the pregnancy (working, etc.). Was the baby wanted/unwanted. Have you ever been pregnant before? When did the pregnancy seem real to you? What were your impressions about the baby during pregnancy? What did you sense the baby might be like?

1a. Tell me about labour and delivery. How did you feel and react at that time? What was the first reaction when you saw the baby? What was your reaction to having a boy/girl? How did your family react (include husband/partner, other siblings)?

1b. Did the baby have any problems in the first few days after birth? How soon was the baby discharged from the hospital? Did you decide to breast- or bottle-feed? Why?

1c. How would you describe the first few weeks at home: feeding, sleeping, crying, etc. (This can give feeling of 'emotional tone' of baby's entrance into the family.)

1d. Tell me about developmental milestones (sitting up, crawling, talking, etc.) (Try to get a sense of the ways in which the baby was thought to be different – ahead/behind in motor, social, and language development.) Did you have a sense of your baby's intelligence early on? What did you think?

1e. Did your baby seem to have a regular routine? What happened if you did not stay in the routine?

1f. How has the baby reacted to separations from you? Were there any separations of more than a day during the first two years? How was it for you? How did you feel? What did you do?

2a. Describe your impression of your child's personality now.

2b. Pick five words (adjectives) to describe your child's personality. (Give subject enough time to respond before proceeding. If they cannot come up with five descriptors, move on. Numbers are less important than descriptions.) Then tell me at least one specific incident which illustrates what you mean by each word you chose.

3a. At this point, whom does your child remind you of? In what ways? When did you first notice this similarity? (If only one parent is mentioned) and in what ways does your child remind you of (the other parent)? Which of his/her parents is your child like now? In what ways is your child's personality like/unlike his/her parents?

3b. Are there any family characteristics on your side you see in your child's personality? What about (other parent's) side?

3c. How did you decide on your child's name? (Find out about family names, etc.) How well does the name seem to fit?

4. What do you feel is unique or different about your child compared to what you know of other children?

5. What about your child's behaviour now is the most difficult for you to handle? Give a typical example.

5a. How often does this occur? What do you feel like doing when your child reacts this way? How do you feel when your child reacts this way? What do you actually do?

5b. Does she/he know you don't like it? Why do you think he/she does?

5c. What do you imagine will happen to this behaviour as your child grows older? Why do you think so?

6a. How would you describe your relationship to your child now? (Give time to respond.)

6b. Pick five words (adjectives) -

7a. What pleases you most about the relationship with your baby? What do you wish you could change about it?

7b. How do you feel your relationship with your child has affected your child's personality

7c. Has the relationship to your child changed at all over time? In what ways? What's your own feeling about this change?

8. Which parent is your child closest to now? How can you tell? Has it always been that way? Do you expect that to change (as child gets older)? How do you expect it to change?
9. Does your baby get upset often? What do you do at these times? What do you feel like doing when this happens? What do you feel like at these times?
- 9a. What about when he/she becomes emotionally upset? Can you recall a specific sample? What did you do when that happened? What did you feel like doing? What did you feel like?
- 9b. What about when he/she has been physically hurt a little bit? (example; what did subject feel like/do)
- 9c. Has your child been sick at all? (example; how responded affectively and behaviourally)
10. Tell a favourite story about your child, perhaps one to have told to family and friends. (Give plenty of time.)
11. Are there any experiences which h your child has had which you feel may have been a setback for him/her? Why do you think so? Knowing what you know, if you started all over again with your child, what would you do differently?
12. Do you ever worry about your child? What do you worry about?
13. If your child were to be one particular age, what age would you choose? Why?
14. As you look ahead, what will be the most difficult time in your child's development? Why do you think so?
15. What do you expect your child to be like as an adolescent? What makes you feel this way? What do you expect to be good and not so good about this period in your child's life?
16. Think for a moment of your child as an adult. What hopes and fears do you have about that time?

## **Appendix 7**

### **The Working Model of the Child Interview: Assessing Mothers’ Representations of their Children in a Clinical Setting.**

#### **Working Model of the Child Interview Questions**

(pre-natal interview)

1. I'd like to begin with you telling me about your pregnancy. I am interested in things like whether it was planned or unplanned, how you feel physically and emotionally, and what you are doing during the pregnancy (working, etc.). Have you ever been pregnant before? Does the pregnancy seem real to you? What are your impressions about the baby during your pregnancy? Do you intend to breast- or bottle-feed? Why?

2a. What do you sense the baby might be like?

2b. Pick five words (adjectives) to describe what your child's personality will be like when she/he is born. (Give subject enough time to respond before proceeding. If they cannot come up with five descriptors, move on. Numbers are less important than descriptions.) For each one, what makes you say that?

3. Have you decided on your child's name yet? (Find out about family names, etc.)

4a. How would you describe your relationship with your child now while you are pregnant? (Give time to respond.)

4b. Pick five words to describe your relationship. Describe a memory or incident that would illustrate what you mean.(adjectives)

5. Has the relationship to your child changed over time during the pregnancy? In what ways? What's your own feeling about this change?
6. Do you ever worry about your baby? What do you worry about?
7. As you look ahead, if your child were to be one particular age, what age would you choose? Why?
8. What will be the most difficult time in your child's development? Why do you think so?
9. What do you expect your child to be like as an adolescent? What makes you feel this way? What do you expect to be good and not so good about this period in your child's life?
10. Think for a moment of your child as an adult. What hopes and fears do you have about that time?

## **Appendix 8**

### **Sub-classifications of the WMCI**

#### **Balanced –Full**

The caregiver is well aware of the child as an individual with developmental needs for both dependency and autonomy. Difficulties with the child or caregiving role are recognized and placed into situational or developmental context. Protection of the infant is ensured in times of stress (e.g., a mother with PPD seeks caregiving relief until she feels better). The caregiver is open to accommodate new information about the child and parenting.

The transcripts convey coherence and a richness of detail. Statements are supported by specific examples and the caregiver is able to stay with the topic. Emotional laden experiences (e.g., the loss of a previous child) are acknowledged and integrated into the discourse. The interview gives the impression that a ‘singular’ as opposed to ‘multiple’ model of representation has been provided.

#### **Balanced-Restricted**

Overall these transcripts meet the criteria for the Balanced-Full subcategory, but the description of the relationship with the child is somewhat affectively muted. The effects of caregiving on the child are downplayed. This subtype is similar to disengaged representations.

#### **Balanced-Strained**

Most of the criteria for a fully balanced representation are met, but the relationship with the infant is perceived as difficult, and the mother seems to be struggling with the role as caregiver. Difficulties are acknowledged and sometimes described in a humorous fashion. The transcript may include hints of role-reversal, such as playful descriptions

of the child as a friend, confidante, or support, but responsibility for the child is clearly acknowledged.

### **Disengaged-Impoverished**

These representations are characterised by a distinct lack of caregiver psychological involvement. The caregiver does not seem to know who the child is and descriptions of the child are often stereotypical and unsupported by specific examples. Negative affects towards the child are intellectualised or not acknowledged directly. The caregiver often has difficulties interpreting infant cues and may have a very poor understanding of developmental needs. Interviews may contain direct references to lack of memory (“I don’t know”) and are often short. In extreme cases the caregiver may even indicate a dislike for the child.

The transcripts overall coherence is disrupted by a consistent aloofness and indifference in the description of the child and caregiving relationship. The overall affective tone of the transcript is ‘Indifference’.

### **Disengaged-Suppressed**

The caregiver has some understanding about the child and is more involved with the caregiving relationship, but a prevailing defensive emotional distance and reluctance to reflect upon the caregiving relationship and the needs of the child are the most striking features of this representation.

### **Distorted-Distracted**

The caregiver seems to be unable to focus on the topic and appears preoccupied with concerns which may be related or unrelated to the child and caregiving. Difficulties with the infant and role as caregiver are not placed into context, and the impact of caregiving on the infant are not realised. Unawareness of developmental needs may lead to unrealistic expectations of the child. Affective tones of the transcript, such as anger, disappointment and guilt, are often high.

**Distorted-Confused**

Representations include criteria for the distracted subcategory, but are highlighted by their incoherence. The caregiver seems uncertain or overwhelmed, even bewildered, about the child and caregiving role. Anxiety may be a prominent affective tone.

**Distorted Role-Reversed**

Features of one or more distorted subtypes may be present, but the most striking feature is that the mother sees the child as a source of comfort. The relationship might be described as a friendship. Involvement with the infant is high and the child might be expected to comply and please. Affects seem out of context. The detrimental impact of a caregiving relationship in which the caregiver cannot regulate her own emotions or those of the child is not understood.

**Distorted Self-Involved**

The caregiver seems to be preoccupied with self or personal problems. Descriptions of the infant evolve more around self as a caregiver. The child meets the needs of the caregiver (e.g., to feel loved and needed, or to distract from problems).

Note: Descriptions of WMCI sub-classifications are adapted from Benoit (et al., 1997); Main (1991); Zeanah (et al., 1995).



## Appendix 9

### The Norbeck Social Support Questionnaire

(Norbeck, Lindsey, & Carrieri, 1981)

#### SOCIAL SUPPORT QUESTIONNAIRE

##### PLEASE READ ALL DIRECTIONS ON THIS PAGE BEFORE STARTING

Please list each significant person in your life on the right. Consider all the persons who provide personal support for you or who are important to you.

Use only first names or initials, and then indicate the relationship, as in the following example:

Example:

First Name or Initials

Relationship

1. Mary T

friend

2. Bob

brother

3. M.T.

mother

4. Sam

friend

5. Mrs. R.

neighbor

etc.

Use the following list to help you think of the people important to you, and list as many people as apply in your case.

- spouse or partner
- family members or relatives
- friends
- work or school associates
- neighbors
- health care providers
- counselor or therapist
- minister/priest/rabbi
- other

You do not have to use all 24 spaces. Use as many spaces as you have important persons in your life.

WHEN YOU HAVE FINISHED YOUR LIST, PLEASE TURN TO PAGE 2.

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University of California, San Francisco

For each person you listed, please answer the following questions by writing in the number that applies.

- 0 = not at all
- 1 = a little
- 2 = moderately
- 3 = quite a bit
- 4 = a great deal

Question 1:

How much does this person make you feel liked or loved?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. etc. to 24. \_\_\_\_\_

GO ON TO NEXT PAGE

Question 2:

How much does this person make you feel respected or admired?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. etc. to 24. \_\_\_\_\_

Question 3:

How much can you confide in this person?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. etc. to 24. \_\_\_\_\_

GO ON TO NEXT PAGE

Question 4:

How much does this person agree with or support your actions or thoughts?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. etc. to 24. \_\_\_\_\_

Question 5:

If you needed to borrow \$10, a ride to the doctor, or some other immediate help, how much could this person usually help?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. etc. to 24. \_\_\_\_\_

GO ON TO NEXT PAGE

Question 6:

If you were confined to bed for several weeks, how much could this person help you?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. etc. to 24. \_\_\_\_\_

Question 7:

How long have you known this person?

- 1 = less than 6 months
- 2 = 6 to 12 months
- 3 = 1 to 2 years
- 4 = 2 to 5 years
- 5 = more than 5 years

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. etc. to 24. \_\_\_\_\_

Question 8:

How frequently do you usually have contact with this person? (Phone calls, visits, or letters)

- 5 = daily
- 4 = weekly
- 3 = monthly
- 2 = a few times a year
- 1 = once a year or less

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. etc. to 24. \_\_\_\_\_

PLEASE BE SURE YOU HAVE RATED EACH PERSON ON EVERY QUESTION. GO ON TO THE LAST PAGE.

#### PERSONAL NETWORK

First Name or Initials

Relationship

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. etc. to 24. \_\_\_\_\_

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. etc. to 24. \_\_\_\_\_

Question 9.

During the past year, have you lost any important relationships due to moving, a job change, divorce or separation, death, or some other reason?

- \_\_\_\_\_ 0. No  
\_\_\_\_\_ 1. Yes

IF YOU LOST IMPORTANT RELATIONSHIPS DURING THIS PAST YEAR:

9a. Please indicate the number of persons from each category who are *no longer available* to you.

- |                              |                                   |
|------------------------------|-----------------------------------|
| _____ spouse or partner      | _____ family members or relatives |
| _____ friends                | _____ work or school associates   |
| _____ neighbors              | _____ health care providers       |
| _____ counselor or therapist | _____ minister/priest/rabbi       |
| _____ other (specify) _____  |                                   |

9b. Overall, how much of your support was provided by these people who are no longer available to you?

- \_\_\_\_\_ 0. none at all  
\_\_\_\_\_ 1. a little  
\_\_\_\_\_ 2. a moderate amount  
\_\_\_\_\_ 3. quite a bit  
\_\_\_\_\_ 4. a great deal