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Addressing the mother-baby relationship in Interpersonal Psychotherapy for depression: an overview and case study.

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Objective: This article describes the development of an interpersonal psychotherapy group which has been adapted to address the mother-child relationship in the context of postnatal depression (PND).

Background: When PND develops, the child of the sufferer is also at risk for deleterious outcomes. It is thought that this is because the mother-baby bonding process is interrupted, affected, or reduced in quality by the existence of depression in addition to genetics and biological effects of exposure to illness in utero. Past approaches to mitigating this risk have focussed on treating the depression as the primary issue and the mother-baby relationship as secondary. This article makes the argument that interpersonal psychotherapy has neglected this relationship despite the evidence that this is a key precipitating/perpetuating factor in postnatal depression, and that targeting this relationship has benefits for both mother and baby. *Method:* An interpersonal psychotherapy protocol was developed, modified to incorporate psychoeducation and practice of maternally sensitive interactions. A case study from a version of this group intervention is provided. *Results:* The case study outcomes on self-report scales of depression suggest the modified protocol is as effective in treating PND as the original protocol. Self-report of maternal attachment and videotape measures of maternal sensitivity also improved, suggesting that the modified protocol can address the mother-baby relationship.

Conclusion: The suitability of adapting interpersonal psychotherapy to address the mother-baby relationship appears promising. Further rigorous trials using this therapy are warranted to determine its effectiveness.

Keywords: postnatal depression; interpersonal therapy; maternal sensitivity; mother-baby relationship; group therapy

Word count: 4,098 words

Motherhood is a time of transformation across the spectrum of functioning for women. For most, motherhood is associated with greater wellbeing and satisfaction (Holton, Fisher, & Rowe, 2010). However, it can also be associated with challenges, one of the biggest being that of postnatal depression (PND). For some 7-16% of women (O'Hara & Swain, 1996), new motherhood is associated with the onset of PND. Whilst PND is not a distinct disorder from Major Depressive Episode, there are some clinical differences. The psychosocial stressors surrounding new motherhood, including sleep disturbance and breastfeeding pain, have been shown to increase inflammatory hormones associated with depression (Kendall-Tackett, 2007). There is a higher risk for PND in women with poor marital relationships, and those who develop PND report greater symptoms for a greater duration, and are more susceptible to later recurrence of depression relative to women with supportive relationships (Campbell, Cohn, Flanagan, Popper, & Meyers, 1992). Mothers can find it difficult to engage in depression treatments due to the demands of motherhood, reluctance to disclose their feelings, and concerns about antidepressant medication use during breastfeeding (Dennis & Chung-Lee 2006; Goodman, 2009).

Another clinical difference for PND is in its impact on the psychological health of someone other than the sufferer. Children of mothers with PND have been shown to be at-risk in a number of areas. These include low birth weight (Gracka-Tomaszewska, 2010) and poor sleep development (Armitage et al., 2009). The offspring of mothers with clinical or subclinical depressive symptoms are more likely to be exposed to negative maternal affect and behaviours (Lovejoy, Graczyk, O'Hare, & Neuman, 2000) which can influence negative affective states and bias their interactions with others (Tronick & Reck, 2009). Children of mothers who demonstrated even low-level depression symptoms in their child's early childhood are more likely to show internalising and externalising behaviour problems in late childhood (Connors-Burrow et. al., 2015). A combination of antenatal and postnatal maternal

depression demonstrates long-term effects on the cognitive development and depressive illness risk of children (Asselmann, Wittchen, Lieb, & Beesdo-Baum, 2015; Sanger, Andrew, & Ramchandani, 2015).

One of the mechanism of transmission of risk for mental health disorders is thought to be associated with the mother's attachment security and her behaviour with the child, and there is growing evidence to suggest maternal attachment style can be seen as a mediator (Toth, Cicchetti, Rogosch, & Sturge-Apple, 2009). However, women with a pre-existing negative model of the self and others have been shown to be at higher risk of developing PND (Wilkinson & Mulcahy, 2010). This leads to impairment of the mother's ability to provide a secure bond with her infant (von der Lippe, Eilertsen, Hartmann, & Killen, 2010), which impairs her ability to teach her child to interact socially. This may affect the interpersonal style of her child, in turn leading to greater susceptibility to mental health problems (Fonagy & Target, 2005).

This suggests that the mechanism of transmission of susceptibility to mental health problems involves either maternal *behaviours*, as operationalised in the concept of maternal sensitivity (Stayton, Hogan, & Ainsworth, 1971), or maternal *cognitions*, such as in the concept of parental reflective functioning (Slade, 2005). The review of the construct of maternal sensitivity by Shin, Park, Ryu, and Seomun (2008) describes it as involving multiple aspects of a mother's behaviour including appropriateness, timing, situational awareness, emotional availability, and expressiveness. These overlap with the definition of parental reflective functioning (Slade, 2005). Parental reflective functioning is described as the ability of the parent to use their understanding of their child's mental states to anticipate their child's needs and build the child's ability to make sense of his internal state (Slade, 2005). Low levels of maternal sensitivity have been shown to be related to various deleterious child outcomes such

as poorer cognitive development (Bernier, Carlson, & Whipple, 2010), behavioural and social problems (Campbell, Spieker, Vandergrift, Belsky, & Burchinal, 2010), and emotional reactivity (Braungart-Rieker, Hill-Soderlund, & Karrass, 2010). Research on the concept of parental reflective functioning is rarer; however, there seems to be an indirect relationship between parental reflective functioning, attachment, and mental health (Bouchard et al, 2008).

Addressing maternal sensitivity deficits to improve infant outcomes

There is a growing field of interventions aimed at therapeutically addressing the intergenerational transmission of poor attachment style. Bakermans-Kranenburg, van Ijzendoorn, and Juffer (2003) found 70 published studies on the impact of maternal sensitivity, social support, maternal mental health, or reflective functioning interventions on child-parent attachment. They found a moderate effect size for altering a child's attachment style, with interventions focussed solely on maternal sensitivity found to be the most effective.

Whether these are effective in the context of PND is not yet determined. Migrom & Holt's (2014) review of mother-infant interventions targeted at women with PND concluded that there were very few of them, and they "rarely used RCT methodology, were poorly evaluated, of long duration, and generally have not assessed infant outcomes". Whether or not these interventions can eventually address the PND-attachment process, they are all adjuncts to the treatment of PND.

Addressing the issue from the other side, Poobalan et al (2007) conducted a literature review of studies treating PND and their effect on the child. They found eight trials of PND treatments containing moderate to strong methodologies. These studies variously investigated

toddler-parent, counselling, cognitive-behavioural, psychodynamic, mother-infant, and interpersonal therapies, support programs, psychoeducation, interaction coaching, and infant massage. All treatments for PND had some impact on the mother-infant interaction and child behavioural problems. However, only one study (Cicchetti et al, 2000) showed a significant impact on child cognitive development. The treatment was toddler-parent psychotherapy conducted weekly over an average of 57 weeks, and the foci of treatment were mother-child interaction, maternal representations of the child, and developmental guidance. There was no long-term follow-up, and other studies of different therapies with long-term follow-up have not shown sustained child outcomes (Poobalan et al). Two recent randomised controlled trials of home-visiting programs focussed on both PND and attachment were unsuccessful at either preventing/reducing PND, or improving child outcomes (Cooper, De Pascalis, Woolgar, Romaniuk, & Murray, 2015; Guedeney et al, 2013). Current PND treatments therefore remain adjunct treatments to the mother-child relationship, but show some promise in their ability to address this relationship.

Interpersonal therapy is a relationship-focussed PND treatment

Interpersonal psychotherapy (IPT) is a focused, short-term therapy originally developed for depression, which emphasises its interpersonal context (Klerman & Weissman, 1993). It addresses one or more of three interpersonal functioning areas: *interpersonal disputes*; *role transitions*; and *grief*. IPT is an integration of a number of theory bases, drawing methodology from attachment, social learning, and communication theories (Stuart & Robertson, 2003). Whilst IPT does not directly address attachment, it is theoretically grounded in the work of Bowlby (1988) which states that people develop an inner working model of how relationships operate. IPT focuses on here-and-now relationships which are problematic a result of the patient's attachment style, and uses Kiesler's (1979) communication theory to guide the

treatment of this. Kiesler theorised that interpersonal problems occur as a result of negative or non-supportive responses from others. IPT therefore attempts to improve the communication skills of the client to allow them to enlist and better utilise social support to provide distress relief, enjoyable experiences, and a sense of belonging (Deans, Reay, & Stuart, 2015).

IPT has been shown to be effective for major depressive episode at any stage in life (de Mello, de Jesus Mari, Bacaltchuk, Verdeli, & Neugebauer, 2005). It has proven effective for PND in controlled trials with large sample sizes, different comparison groups, and individual and group settings (Grote et al., 2009; O'Hara, et al., 2000; Miniati et al., 2014; Spinelli, & Endicott, 2003). IPT is therefore a PND treatment which has the potential to directly address maternal sensitivity in a similar manner to the attachment-based therapies. However, IPT so far has not been shown to make significant changes to the mother-baby relationship or the outcomes for the child (Forman et al, 2007).

Forman and colleagues (2007) suggest two possible causes for why IPT fails to change the course of the mother-baby relationship. One possibility is that when the mother's relationship with the child is formed under negative circumstances (such as during a depressive episode), then it remains stable and resistant to treatment. This suggests that the depression would need to be addressed at a much earlier stage. However, previous preventive/early interventions have not had success (Murray, et al., 2003). The second possibility is that the IPT simply did not target the mother-child relationship. When IPT targets different relationships, such as the marital relationship (Forman et al, 2007) or the adolescent-parent relationship (Mufson et al, 2004), these relationships improve. Clark, Tluczek, and Wenzel (2008) found that a standard IPT treatment for depression could increase maternal positive affective involvement and verbalisation. The authors speculated that the presence of infants during IPT sessions for mothers may have resulted in added therapeutic benefits to the mother-infant relationship.

Grigoriadis and Ravitz (2007) suggest that it would be possible under an IPT protocol to focus on the relationship with the newborn, working in the traditional IPT areas of recruiting or using support to help with the care of the child, and on assisting parents become more attuned and responsive to their child during their period of recovery. These are two important areas of IPT foci: the relationship, and the social support outside of the relationship. One difficulty in adapting IPT treatment to the mother-child relationship might be due to the focus on verbal communication during conflicts. The normal use of direct, verbal, unambiguous communication cannot occur due to the young child's inability to verbalise words, thoughts, or feelings. A modification of IPT to address the behaviours in the mother-baby relationship may have to focus less on the standard communication work of Kiesler (1979) and more on attachment work, specifically from the maternal sensitivity literature. Nicholls and Kirkland (1996) reviewed the literature on maternal sensitivity and found the following common elements. These appear to closely overlap with the IPT techniques of understanding and communicating needs and expectations:

- Perceiving, interpreting, and responding to baby's signals of emotional state and needs.
- Responding to emotional requests and providing emotional plus instructional support.
- Ensuring communication is developmentally appropriate, non-intrusive, and consistent.

Required adaptations to IPT for the mother-child relationship

An adaptation of IPT to directly address the mother-baby relationship would make important but not inconsistent amendments to the assessment and therapeutic stages of the therapy.

There are limitations to the amount of attachment or parent-infant work that can be completed in an IPT context – the aim would not be to complete an entire course of parent-infant

therapy. However, there may be significant positive implications for the incorporation of some maternal sensitivity work into a therapy which is procedurally focussed on relationships.

Changes to the assessment stage. An important part of the assessment for IPT work is the development of an Interpersonal Inventory, which is a detailed review of the patient's current relationships, including any patterns in those relationships. The client is asked about the expectations each party has of the other, the joyful and difficult aspects of the relationship, and desired change. An interpersonal circle surveys the client's interpersonal world, containing three concentric circles of relationship in terms of "closeness". In our experience, mothers often create a dot in the centre of these circles, reserved for their children. The children are described as being different from other people in the relationship with the woman e.g. "part of me". We postulate that this relates to the bonding between mother and child as it qualitatively differentiates the position of the child in her world (as per Stern, 1995). Whilst her relationship with her child is therefore different to other relationships, it also has similarities. A mother is capable of describing the IPT facets of a relationship with her baby: her expectations of the baby, baby's expectations of her, the joyful and difficult times, and things she would like to change. The initial interview includes an assessment of the mother's internal working model of relationships. This information is used to make inferences about problems in her relationships, including the caregiving relationship.

Changes to the therapeutic stage: Including the child in the group of relevant relationships for therapy provides the mother with an opportunity to discuss her expectations of and experiences since becoming a mother, and allows the mother to consider coming into the world from her child's perspective, thereby developing reflective functioning ability. IPT develops skills in understanding one's own and others' emotional expression. Attachment therapies show that reflecting on positive and negative emotional experiences in parenting has

benefits, and understanding how these states are intentionally or unintentionally expressed would affect maternal sensitivity. The typical focus in IPT is on verbal communication; we postulate that during mother-child work there is a need to focus on the range of ways in which humans express emotion. Group brainstorming work would allow for individual and vicarious discovery of this.

A key technique of IPT is the analysis of a difficult episode of communication: the client is asked to role-play a difficult conversation, reflect on it, and brainstorm alternative behaviours. Mothers regularly report difficult interactions with their babies; much of early parenting involves trial-and-error to resolve the baby's distress. This provides scope for the use of communication analysis. Where role-play is difficult to achieve, it may be possible to use videotape material to stimulate conversation.

IPT for the mother-child relationship: A case example

Description of intervention. A short-term group IPT (mother-child) intervention for PND, modified in line with the above changes to the assessment and therapeutic stages of IPT, was developed and manualised. The intervention is informed by the group model of Wilfley and colleagues (2000), and based on the work of Reay and colleagues (2010), who developed an 8-week (plus partner session) Group IPT for postnatal depression. The mother-child IPT modified existing weeks and added two weeks of additional content to create a 10-week therapy group, as detailed in Table 1.

Table 1. Modified group IPT with maternal sensitivity concepts.

Weeks	Content
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Pre-group	Two individual sessions assess suitability for IPT, develop the Interpersonal Inventory, and identification of problem areas as per Wilfley et al (2000),.
1	Introductory week as per Reay et al (2010)
2-3	Focussed on the role transition to parenthood as per Reay et al (2010). It also alerts mothers to the fact that in being born, their babies have also undergone a major life adjustment, and focusses on the maternal process of getting to know the baby.
4-5	Communication analysis work aimed at developing maternally sensitive behaviours. Considering how one communicates intentionally and unintentionally. Viewing a videotape of a mother and child (not a group member) and brainstorming what each was communicating.
Half-way	A psycho-educational partner session as per Reay et al (2010),.
6-8	IPT problem areas to address each member's interpersonal focus. as per Reay et al (2010).
9-10	Social support and planning for relapse prevention as per Reay et al (2010).

Case study: A version of the group was held with a small group of Melbourne-based mothers referred via their Maternal and Child Health Nurse as presenting with depressive symptoms. Inclusion criteria were that mothers met SCID-II criteria for major depressive episode in the postpartum period; had babies under 12 months; and had suitable English skills to participate in a group. Exclusion criteria were psychiatric hospitalisation or existence of psychosis.

Research on this group was approved by the Victoria University Human Research Ethics Committee and participants provided informed consent to the use of their de-identified data. The following case study emphasises some of the work done during the sessions.

Background: Tracey was a first-time Australian-born mother with a partner. Her seven month old infant had difficulties sleeping. Tracey was referred by her child health nurse due to her raised EPDS score. At assessment, Tracey described a sense of feeling 'flat' most of the time and being highly sensitive to others' remarks. Tracey reported a difficult transition to parenthood; she missed her old life and resented the fact that she was the main caregiver for her baby. She felt jealous of childless friends, and let go of a number of friendships. She felt guilty about wishing to have time away from her baby, or not missing him during baby-free time. She was frustrated at not keeping up with household chores, had low energy and felt sleep deprived all of the time. She felt insecure about her performance as a parent, often interpreting events to mean that she was not 'good enough' as a mother. She had left her full-time job and felt a lack of financial freedom now that she was not earning any of the household income. This led to awkwardness with her partner about the topic of money. Tracey reported a number of interpersonal factors that contributed to her vulnerability to depression, including a family and personal history of depression, and physical distance from her family who lived interstate. Tracey found it difficult to discuss her feelings with others, even with her close family. The assessment showed the IPT problem areas of interpersonal disputes with her partner, and difficulties adjusting to the role transition to motherhood. Tracey identified her child as belonging in the 'centre' of her Interpersonal Circle, as more part of her than a separate person. Tracey's self-report of maternal attachment was reasonably high, but her self-report of parenting

stress was high and her depressive symptoms were at a clinical level. The videotape measure indicated strong scores in non-hostility and non-intrusiveness, with medium-low scores on maternal sensitivity, child-responsiveness, and child-involvement.

Standard IPT themes:

Consistent with her interpersonal style, Tracey took time to interact meaningfully with other participants, and expressed feeling stuck in her communication patterns with her partner. She found it difficult to make him understand her sense of being overwhelmed with the work involved in looking after the baby. During role-play and brainstorming she was able to realise that her expectations of her partner were uncommunicated or unrealistic. She found it useful to listen to the discussion about communication styles, giving her insight and ideas about small changes that she could make to her communication style that could impact on what her partner was able to say to her. During the section on social support, Tracey was able to describe her wish for closer relationships with family members, particularly her father, and to brainstorm possible first steps to achieving that. By the end of the group work, Tracey had started going to a mother-baby gym which allowed for dedicated playtime and time to meet other mothers. She took on some part-time work and was able to ask her partner to support her with this.

Mother-baby relationship themes:

During the session regarding role transitions, Tracey identified some negative experiences about being a parent that the other participants shared. This was an opportunity for her to bond with group members and share her parenting difficulties in a supportive setting. When other participants struggled to identify

positive aspects to the new role of parent, Tracey was able to identify that she enjoyed watching her baby learn things. She subsequently reported that her mood had lifted as she started thinking of her baby as another person, rather than as a source of work. She was able to build on this to understand her baby during more difficult interactions, such as messy nappy changes, and respond with attempts to communicate with her baby rather than silently attempt to physically restrain him.

She found it useful during the role transitions section to start viewing positively some of her coping mechanisms, instead of feeling guilty that, for example, she is sleeping when the baby sleeps. This allowed her to see herself as managing a role transition to 'being a mother'. It also allowed her to dedicate time to playing with her baby rather than feeling frustrated that she was not 'getting things done'. She reported a greater sense of joy from her time with her baby. Importantly, Tracey started to talk about her baby in terms of his wishes and communication skills: she started interpreting his talk, behaviours and wishes: "he likes phones – he's trying to get your phone". The development of Tracey's maternal sensitivity behaviours and her observed parental reflective functioning coincided with an improvement in Tracey's report of her mood.

Measures:

Table 2 shows Tracey's change in scores from Time 1 (pre-group) to Time 2 (follow-up at three months post completion of the group). Her depression scores improved across the timeframe, moving from the 'moderate' to the 'mild' range. A videotape measure of maternal-child relationship, the Emotional Availability Scales (Biringen & Robinson, 1991) was completed to provide a complementary measure of the relationship to Tracey's self-report. Tracey made improvements in

the subscales of maternal sensitivity (from ‘risk’ to ‘non-risk’), and in structuring, non-intrusiveness, child involvement and child responsiveness (from ‘non-risk’ to ‘optimal’). This increase in maternal sensitivity is consistent with the IPT focus on this skill. Her non-hostility scale remained consistent over time. Her self-report of the attachment also improved slightly across time, and her reported parenting stress decreased.

Table 2. Changes for client ‘Tracey’ on group measures

Measures	Pre-group	Follow-up
Beck Depression Inventory	27	16 (reduced depression)
Beck Anxiety Inventory	25	15 (reduced anxiety)
Maternal Attachment Inventory	87	89 (increased attachment)
Parenting Stress Inventory	105	115 (increased stress)
Infant Characteristics Questionnaire	94	80 (reduced distress)
EAS Subscales:		
<i>Maternal sensitivity</i>	4.75 (Risk)	6.5 (Non-Risk)
<i>Child responsiveness</i>	4.0 (Non-Risk)	6.5 (Optimal)
<i>Non-hostility</i>	6.0 (Optimal)	6.5 (Optimal)
<i>Structuring</i>	4.5 (Optimal)	6.5 (Optimal)

*EAS risk categories are based on Vliegen, Luyten, & Biringer (2009) of ‘risk’, ‘non-risk’, and ‘optimal’.

Discussion

This review and the attached case study suggests that a manualised, short-term PND treatment consistent with Interpersonal Psychotherapy and incorporating the mother-child relationship is possible. The inclusion of material with a mother-baby relationship focus did not reduce the ability to focus on standard IPT themes as they

became important. For example, switching between participants' reports of their relationships with partners and with children occurred throughout the therapy, and did not require a significant change in techniques. The core technique of focusing on episodes of communication and discussing positive or negative impacts on mood remained consistent across relationship types. The impact of the therapy on depressive symptomatology appears to be undisturbed by the modification of the material, and importantly, the pilot was able to show an impact on an objective measure of the mother-baby dyad, which has not been possible to demonstrate in prior PND treatments.

Limitations: This is a single case design and did not include a post-group SCID-II assessment; therefore, the proven effectiveness of this treatment for PND remains to be demonstrated. In addition, there was no child age-matched comparison to address the possible impact of child development and the continuing development of the mother-baby relationship, on maternal sensitivity. One possibility is that as mothers gain more experience as mothers, their sensitivity increases. A randomised trial with age-matched control group would address this. The intervention was also facilitated by one of the authors, and should be tested with therapists who are unfamiliar with the development of the protocol.

From our experience with this case, the inclusion of videotape material, consistent with attachment interventions, is not a standard IPT protocol. The participants' understanding of mother-child communication appeared to be more effectively achieved during the brainstorming session and in the 'challenges for baby' work. It may be possible to remove the videotape material in order to increase adherence to IPT techniques.

Conclusion

Interpersonal psychotherapy is an effective treatment in addressing mothers' key relationship issues that precipitate and exacerbate PND. To date, it has not focussed on addressing relationship problems between women and their infants, despite the growing evidence that PND can interfere with this developing relationship in negative ways. This paper proposes a theoretically intuitive way of incorporating mother-baby work into IPT using existing techniques. Where those techniques are not directly transferable, the principles of attachment-based therapies lend themselves to a consistent addition to the intervention. Our experience with a group IPT intervention for postnatal depression that addresses *all* key relationships has shown that the participants value the mother-baby material, that it fits with their therapeutic goals, and that it appears to improve important aspects of the mother-baby relationship. We found it was feasible to deliver the modified group protocols within the brief time frame. Further research into this intervention is recommended to determine whether such an intervention has long term and beneficial impacts on the child.

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