

THE EXPERIENCES OF FIRST-TIME MOTHERS WITH COLIC INFANTS

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KEYWORDS

Infant colic, first-time mothers, parent-infant relationship, psychological support.

ABSTRACT

The purpose of this study is to explore and describe the experiences of first-time mothers with colic infants. Based on the results, implications for clinical practice are described for the clinical psychologist with regards to providing psychological support for these mothers. The research design is qualitative, exploratory, descriptive and contextual. Data was collected by means of in-depth, semi-structured, phenomenological interviews and a descriptive analysis was done. The results show that the real versus the imagined experience of having a baby does not meet mothers' expectations. Furthermore, a colic baby elicits numerous anxieties including anxiety about the baby being damaged/ill, the feeding and leaving the baby in the care of others. Mothers battle with feelings of failure, which may be compounded by a stressful labour/delivery. Multiple attempts to soothe the baby or find an effective treatment result in feelings of helplessness and inadequacy. In turn, hopelessness and depression result. Mothers also perceive others' making judgments about their ability as a mother, while anxiety about failure undermines their capacity to accept support. Furthermore, mothers require affirmation from their baby. Their continued search for a cure offers hope that understanding and control can be gained. However, conflicting information and advice leave them feeling anxious and overwhelmed. Moreover, mothers feel disillusioned with medical personnel and the profession. Both medical and psychological factors are perceived as possible causes of, or contributing factors to, colic, and mothers experience guilt that stressors during their pregnancy may have

contributed to their babies' being colicky. In addition, colic is seen as a punishment for perceived wrongdoings during pregnancy. Given the above, mothers need a containing figure, a function fulfilled by some husbands. If their own mothers are unavailable to contain their anxieties, substitute figures are found. In addition, practical support is experienced as helpful. Regarding maternal grandmothers, mothers identify with them, resulting in a new understanding of them and of the mother-daughter relationship. They also draw on their mothers' perception of their childhood experiences as positive or negative role models of parenting. Mothers feel ambivalent regarding the baby. They exhibit empathy although they perceive the baby as demanding, intrinsically difficult or rejecting. Consequently, mothers experience feelings of rage, resulting in fears of losing control and harming or abandoning the baby. These negative feelings are perceived as impacting on empathy for and bonding with the baby and result in feelings of shame and guilt. A colic baby is a source of stress in the couple's relationship, resulting in strained marital relations. Lastly, mothers renegotiate their identity as women and mothers. Several psychological defence mechanisms are used as a means of resolving emotional conflict and anxiety, and maintaining self-esteem. Clinical implications include adopting parent-infant psychotherapy as a framework for providing psychological support for these mothers. The study concludes that the colic period is stressful, places strain on the marital relationship and may pose a risk to the parent-infant relationship and child development. Lastly, psychological based interventions should be included as a resource for these mothers.

DIE ERVARING VAN EERSTEKEERMOEDERS MET KOLIEKBABAS

SLEUTELWOORDE

Babakoliek, eerstekeermoeders, ouer-kindverhouding, sielkundige ondersteuning.

OPSOMMING

Die doel van hierdie studie is om die ervarings van eerstekeermoeders met koliekbabas te beskryf. Op grond van die resultate word implikasies ten opsigte van ondersteuning vir hierdie moeders deur kliniese sielkundiges in praktyk, beskryf. Die navorsingsontwerp is kwalitatief, eksploratief, beskrywend en kontekstueel. Data is ingesamel deur middel van indiepte, semi-gestruktureerde, fenomenologiese onderhoude en 'n beskrywende ontleding is gedoen. Die resultate toon dat die beleefde ervaring teenoor die geantisipeerde verwagtings om 'n koliekbaba te hê, nie aan die moeders se verwagtinge voldoen nie. Voorts veroorsaak 'n koliekbaba ook verskeie tipes angs, soos dat die baba beseer of siek kan wees, angs oor voeding en om die baba in iemand anders se sorg te laat. Alle moeders stry teen gevoelens van mislukking, wat vererger word deur 'n stresvolle kraamproses/geboorte. Veelvuldige pogings om die baba te kalmeer of om 'n effektiewe kuur te kry, lei tot gevoelens van hulpeloosheid en onbevoegdheid. Dit gee weer aanleiding tot gevoelens van hopeloosheid en depressie. Moeders dink ook dat hulle vermoëns as 'n moeder deur ander beoordeel word, terwyl hul vermoë om ondersteuning te aanvaar, deur hul vrees vir mislukking ondermyn word. Verder benodig moeders versekering van hulle baba. Moeders se voortgesette soeke na 'n kuur gee aan hulle hoop dat hulle begrip en beheer sal verkry. Teenstrydige inligting en raad laat hulle egter angstig en oorweldig voel. Moeders voel voorts ook ontnugter met mediese personeel en die mediese professie. Mediese sowel as sielkundige faktore word as moontlike oorsake van of bydraende faktore tot koliek beskou en moeders voel skuldig dat stressors gedurende hulle swangerskap moontlik kon bydra

tot hulle baba se koliek. Koliëk word ook gesien as 'n straf vir vermeende verkeerde optredes tydens swangerskap. As gevolg van bogenoemde benodig moeders 'n ondersteunende persoon, wat soms hul mans kan wees. Indien grootmoeder aan moederskant nie beskikbaar is nie, word plaasvervangende persone gebruik. Praktiese ondersteuning word ook as nuttig ervaar. Moeders identifiseer met hul baba se oumas aan moederskant, wat meer begrip vir die ouma en van die moeder-dogterverhouding bewerkstellig. Hulle persepsie uit hulle kinderdae van hulle moeders as positiewe of negatiewe rolmodelle van ouerskap, word ook in herinnering geroep. Moeders voel ambivalent oor die baba. Hulle het empatie, terwyl die baba ook as veeleisend, inherent moeilik en verwerpend ervaar word. Moeders ervaar gevolglik gevoelens van woede, wat weer lei tot die vrees om beheer te verloor en om die baba te beseer of te verlaat. Die persepsie is dat hierdie negatiewe gevoelens empatie en binding met die baba beïnvloed en aanleiding gee tot gevoelens van skaamte en skuld. 'n Koliëkbaba is 'n bron van stres vir die ouerpaar se verhouding en veroorsaak 'n gespanne huweliksverhouding. Laastens heroorweeg moeders hulle identiteit as vrou en moeder. Verskeie verdedigingsmeganismes word gebruik om emosionele konflik en angs op te los en om 'n goeie selfbeeld te behou. Kliniese implikasies behels onder andere dat ouer-kindpsigoterapie gebruik word as 'n raamwerk om sielkundige ondersteuning aan hierdie moeders te verskaf. Hierdie studie bevind dat die kolieperiode stresvol is, spanning plaas op die huweliksverhouding en 'n risiko kan inhou vir die ouer-kindverhouding en vir die verdere ontwikkeling van die kind. Laastens behoort sielkundige intervensies ingesluit te word as 'n hulpbron vir hierdie moeders.

PERMISSION TO SUBMIT ARTICLE FOR EXAMINATION PURPOSES

I, the supervisor, hereby declare that the input and effort of L Cox in writing this article, reflects research done by her on this topic. I hereby grant permission for her to submit this article for examination purposes in partial fulfilment of the requirements for the degree Master Artium in Clinical Psychology.

Signed on this day at the North-West University.

.....
Prof V Roos
Supervisor

INTENDED JOURNAL FOR PUBLICATION OF THE ARTICLE

This dissertation will be submitted to HealthSAGesondheid for consideration for publication. See annexure 1 for a copy of the guidelines for prospective authors as set out by HealthSAGesondheid. Furthermore, the Revised Harvard Method is used as a referencing system as required by HealthSAGesondheid.

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THE EXPERIENCES OF FIRST-TIME MOTHERS WITH COLIC INFANTS

ABSTRACT

The purpose of this study is to explore and describe the experiences of first-time mothers with colic infants. The research design is qualitative, exploratory, descriptive and contextual. Data was collected by means of in-depth, semi-structured, phenomenological interviews and a descriptive analysis was done. The results show that the real experience of having a baby does not meet mothers' expectations. Furthermore, a colic baby is anxiety-provoking and mothers struggle with feelings of failure. They search for an explanation for the colic, but feel disillusioned with the medical system. Mothers exhibit a need for a containing figure. They also reflect on their relationship with their mothers. Mothers feel ambivalent towards their babies and marital relationships become strained. Lastly, mothers renegotiate their identity. Based on the results, implications for clinical practice are described for the clinical psychologist as regards providing psychological support for these mothers. Clinical implications include adopting parent-infant psychotherapy as a framework for providing psychological support to these mothers. The study concludes that the colic period is stressful, places strain on the marital relationship and may pose a risk to the parent-infant relationship and child development. Lastly, psychological based interventions should be included as a resource for these mothers.

Keywords: Infant colic, first-time mothers, parent-infant relationship, psychological support

THE EXPERIENCES OF FIRST-TIME MOTHERS WITH COLIC INFANTS

INTRODUCTION

In Western societies, colic or persistent infant crying in the early months is one of the most frequent clinical complaints for which parents seek professional help (Lindberg, 2000:1). Wessel *et al.* (1954:425-426) define colic as fussing or crying in an otherwise healthy infant for “at least three hours a day, on three days a week, for at least three consecutive weeks”. Colic typically occurs when the infant is approximately 2 - 3 weeks old, tends to peak in intensity around 6 weeks and normally resolves around 4 months (St James-Roberts & Conroy, 2005:314). However, despite many studies on early infant crying and its impact on parents, there remains considerable debate with regards to the definition, aetiology and consequences of colic (Maxted *et al.* 2005:58). A lack of coherence in the definition, as well as other methodological limitations, has contributed to research findings that are often unclear, contradictory and unconvincing (Long & Johnson, 2001:156). Thus, for the purposes of this study, colic will be defined by the parents’ threshold for infant crying, i.e. when parents become sufficiently distressed by their infants’ crying and seek help.

Given the above, colic has been thought to be a consequence of an organic disturbance that results in gastrointestinal pain. However, a recent review of the literature concludes that organic disturbances, including lactose intolerance, only account for 1 in 10 colic babies and 1 in 100 babies overall (St James-Roberts & Conroy, 2005:314). Another account views colic as behaviour that cannot be tolerated by the caregiver, suggesting a poorness of fit between infant and parent characteristics (Pauli-Pott *et al.* 2000:125). A third and seemingly leading explanation is that it is the result of neuro-developmental changes that normally take place in early infancy, and that infants who cry often are assumed to be at the extreme end of the normal distribution of

the crying curve (St James-Roberts & Conroy, 2005: 314). Barr (1990:362), however, states that normalising colic deflects clinical attention from managing the sometimes serious effects of colic on the family. Indeed colic has been associated with parent fatigue, depression (St James-Roberts *et al.* 1996:375) and disrupted family life (Long & Johnson, 2001:155). More rarely, parents at the end of their tether shake their babies, resulting in the clinical phenomenon of the shaken-baby syndrome (Morris *et al.* 2000:549) and in a minority of cases, leads to serious and prolonged disturbances of parent-child interaction and child development (Papoušek & Von Hofacker, 1998:395). Thus, colic is a complex problem with infant and parent characteristics seemingly contributing in varying degrees.

If a developmental understanding is adopted, the focus of treatment shifts from attempting to cure colic to containing the mother and her crying infant. In line with this shift, only a few descriptive studies have been conducted to understand colic from mothers' and families' perspectives (Long & Johnson, 2001:156; Wade *et al.* 2005:352). However, none have researched first-time mothers' experiences. Given this, the purpose of this study is firstly to explore and describe the experiences of first-time mothers with colic infants. Secondly, based on the results of the study, implications for clinical practice will be described for the clinical psychologist with regards to providing psychological support for first-time mothers with colic infants. It is hoped that this study will make a contribution to the body of knowledge that seeks to support and/or improve parent-infant relationships and consequently child development.

METHOD

Research Design

The design is qualitative, exploratory, descriptive and contextual (McLeod, 2001:54-56). The aim is to explore and provide a dense description of the experiences of first-time mothers with colic infants within the context in which the experience takes place, i.e. first-time mothers who present

at medical or allied medical facilities, primarily seeking help for their infants' crying (Giorgi & Giorgi, 2003:27). The process is mostly inductive, with the researcher building abstractions, concepts, hypotheses and theories from details given, allowing meaning to be established with respect to how first-time mothers with colic infants make sense of their lives, experiences and the structures of their world (McLeod, 2001:38).

Sampling

The participants are first-time mothers who present at medical or allied medical facilities primarily seeking help for their infants' crying. Purposive sampling was used to achieve saturation of data (Giorgi & Giorgi, 2003:31), which was attained on completion of the seventh interview. All participants met the following sampling criteria:

- First-time mothers, given that a prior experience of motherhood is likely to colour one's experience of a second baby that is colicky.
- Mothers sought help from medical or allied medical personnel, primarily for their infant's crying. Given that in this study, colic is defined by the parents' threshold for infant crying, it is important to note that one is unable to establish whether or not the infants of the mothers who participated in this study actually meet, or met the most commonly used diagnostic criteria for colic i.e. crying in an otherwise healthy infant for "at least three hours a day, on three days a week, for at least three consecutive weeks" (Wessel *et al.* 1954:425-426). However, all the mothers who participated in this study described their babies as currently having, or as having had colic, as did the referring health practitioners, and is thus in keeping with the definition of colic in this study.
- The infants were between the ages of 0 and 12 months. Mothers of older infants were included because in the researcher's experience, mothers in the midst of coping with a colic baby often do not have the reserves to participate in a research study.
- Conversant in English.

- In addition to the sampling criteria, participants were all urban, white, married professional women between the ages of 25 and 35 years.

Data Collection

Data was collected by means of an in-depth semi-structured phenomenological interview (Britten, 2000:11-19), which was recorded on a digital voice recorder and transcribed verbatim (Silverman, 2000:149-151). Each participant was asked the following opening question: "As a first-time mother, could you tell me about your experiences of having a colic baby?" For clarity, questions were asked about the conception, pregnancy, birth and feeding history, support systems and their relationship with their spouse if these topics were not raised during the interview. Comprehensive field notes were taken (Devers & Frankel, 2000:269) including observational field notes (Mulhall, 2003:311), i.e. the setting of the interview, who was present in the home, for example the baby, domestic worker, husband and so on. Thereafter, theoretical field notes (Mulhall, 2003:312) were made in an attempt to derive meaning from the observational notes. Methodological notes (Mulhall, 2003:312) allowed for an evaluation of the researcher's conduct during the interview according to the research design and method. Lastly, personal notes (Mulhall, 2003:312) were made about the researcher's reactions, reflections and experiences. During the analysis of data, the field notes were analyzed in relation to the interviews to help determine themes and categories.

Data analysis

The transcripts were analysed by the researcher and an independent coder according to the descriptive analysis method suggested by Tesch (as quoted by Creswell, 1994:155). The initial reading of the data highlighted a list of topics which were clustered according to similarity. Then the most descriptive wording for each of the topics was found, translating them into themes, categories and related categories. A literature control was conducted where similar studies were

presented forming a basis for comparing and contrasting the findings of this study thereby ensuring trustworthiness (Frankel & Devers, 2000:255).

Trustworthiness

To ensure the trustworthiness of the research, Guba's model (as quoted by Krefting, 1991:214-215) was used. Guba's strategies of credibility, transferability, dependability and confirmability were applied. Table 1 illustrates these strategies.

Table 1: Strategies to ensure trustworthiness

Strategy	Criteria	Application
Credibility	<ul style="list-style-type: none"> • Prolonged field experience and exposure to the field of study 	<ul style="list-style-type: none"> • The researcher completed a course in infant observation and was a member of a parent-infant psychotherapy reading group. • During the interviews, sufficient time was allowed for participants to express their experiences fully. This also encouraged the establishment of rapport. • Participants were followed up on after the interview and psychiatric and psychological referrals were given where necessary.
	<ul style="list-style-type: none"> • Authority of the researcher 	<ul style="list-style-type: none"> • The researcher is trained in research methodology and has completed one other qualitative research project. • A professor in psychology with extensive experience in qualitative research supervised the study.
	<ul style="list-style-type: none"> • Structural coherence 	<ul style="list-style-type: none"> • Throughout the research process, the researcher maintained a 'psychological mind' whilst adhering to the principles of phenomenology, ensuring the integration of data into a logical holistic report (Krefting, 1991:220). • A literature control was conducted to account for varying and/or contradicting experiences of the same phenomenon.
	<ul style="list-style-type: none"> • Interviewing process 	<ul style="list-style-type: none"> • Interviewing methods used include the reframing of questions, repetition of questions, probing of answers to elicit as full a description of participants' experiences as possible.
	<ul style="list-style-type: none"> • Reflexivity 	<ul style="list-style-type: none"> • Reflective field notes were done, tracking the influence of the researcher's assumptions and biases on the study.
	<ul style="list-style-type: none"> • Member checking 	<ul style="list-style-type: none"> • Preliminary findings were sent to several participants for comment.
	<ul style="list-style-type: none"> • Peer examination 	<ul style="list-style-type: none"> • Discussions with regards to the research process and findings were held with a clinician in the field of parent-infant psychotherapy.

Transferability	<ul style="list-style-type: none"> • Nominated sample 	<ul style="list-style-type: none"> • The sampling method was purposive, with no prior selection.
	<ul style="list-style-type: none"> • Dense description 	<ul style="list-style-type: none"> • A complete description of design, methodology and literature control allows for transferability judgements to be made by others should they wish.
Dependability	<ul style="list-style-type: none"> • Audit trail 	<ul style="list-style-type: none"> • Keeping personal logs and field notes.
	<ul style="list-style-type: none"> • Dense description 	<ul style="list-style-type: none"> • Research methodology fully described, allowing replication of the study.
	<ul style="list-style-type: none"> • Peer examination 	<ul style="list-style-type: none"> • Independent checking by a colleague who played the role of "devil's advocate".
	<ul style="list-style-type: none"> • Code-recode procedure 	<ul style="list-style-type: none"> • Consensus discussions between the researcher and the independent coder.
Confirmability	<ul style="list-style-type: none"> • Audit trail 	<ul style="list-style-type: none"> • As discussed.
	<ul style="list-style-type: none"> • Triangulation 	<ul style="list-style-type: none"> • A literature control was conducted where similar studies in the field of psychology and child development are presented, forming a basis for comparing and contrasting the findings of this study.
	<ul style="list-style-type: none"> • Reflexivity 	<ul style="list-style-type: none"> • As discussed.

Ethical Considerations

This study is part of a project entitled: "An exploration of enabling contexts" for which ethical permission was granted (# 05K14) and extends to this study. The participants were informed about the research project. Informed consent was obtained. They were also advised that they could withdraw at any point. Confidentiality and anonymity of the source material was maintained (SA Health Info, 1999:34-35).

AN INTEGRATED DISCUSSION OF THE FINDINGS

Table 2 presents an overview of the major themes and categories of first-time mothers with colic infants.

Table 2: An overview of the major themes and categories of first-time mothers with colic infants.

Theme	Category	Related Category
The real versus the imagined experience of having a baby	<ul style="list-style-type: none"> • The real versus the imagined experience of having a baby does not meet mothers' expectations, leaving them feeling unprepared and out of control. 	
A colic baby is anxiety-provoking	<ul style="list-style-type: none"> • Colic elicits anxieties about the baby being damaged or ill. • Mothers feel anxious and ambivalent about feeding the baby. • Mothers feel anxious about leaving their baby in the care of others. 	
Feelings of failure	<ul style="list-style-type: none"> • Multiple attempts to soothe the baby or find an effective treatment leave mothers feeling helpless and inadequate. • Mothers struggle with feelings of hopelessness and depression, related to their perception of colic as interminable and their impotence to effect change. • A stressful labour/delivery leaves mothers emotionally vulnerable, compounding their sense of failure. • Mothers perceive some advice given by medical professionals, family and friends as a judgement on their ability as a mother. • Mothers' anxieties about failure undermine their ability to accept support. • Mothers need affirmation from the baby. • Mothers use psychological defence mechanisms to ward off anxiety and maintain self-esteem. 	<ul style="list-style-type: none"> • Intellectualisation. • Splitting and suppression or repression of affect. • Focus on the instrumental aspects of mothering

Theme	Category	Related Category
<p>Search for an explanation for the colic.</p>	<ul style="list-style-type: none"> • Mothers' search for information on the causes of and treatment for colic offers hope that understanding and control can be gained. • Conflicting information and advice leave mothers feeling anxious and overwhelmed. • Mothers perceive medical and/or psychological factors as possible causes of, or contributing factors to, colic. • Mothers struggle with feelings of guilt that stressors during their pregnancy may have contributed to their baby having colic. • Colic is seen as a punishment for perceived wrongdoings during the pregnancy. 	<p>Medical factors:</p> <ul style="list-style-type: none"> • Prematurity. • Lactose intolerance. • The result of labour and/or birth complications. <p>Psychological factors:</p> <ul style="list-style-type: none"> • Stress during the pregnancy.
<p>Disillusionment with medical personnel and profession.</p>	<ul style="list-style-type: none"> • Mothers perceive medical personnel as insufficiently supportive or dismissive of their concerns. • Mothers feel disappointed that a cure for colic has not been found. 	
<p>Need for a containing figure.</p>	<ul style="list-style-type: none"> • The experience appears to break down mothers' psychological defences, bringing to the fore vulnerabilities and the need to be mothered and contained. • Husbands function as an emotional container. • Mothers perceive practical support as helpful. • Mothers perceive their own mothers as being anxious, struggling to contain their daughters' anxieties, prompting the need for a substitute containing mother figure. 	
<p>Mothers reflect on their mothers as women and mothers.</p>	<ul style="list-style-type: none"> • Identification with their mothers results in a new understanding of them and of the mother-daughter relationship. • Mothers draw on their perception of their childhood experiences of their mothers as either positive or negative role models of parenting. • Psychological defence mechanisms utilised to resolve possible emotional conflict and ward off anxieties around this relationship. 	<ul style="list-style-type: none"> • Idealisation.

Theme	Category	Related Category
<p>Ambivalence towards the baby.</p>	<ul style="list-style-type: none"> • Mothers demonstrate empathy for their baby. • Mothers perceive their baby as demanding and endlessly needy. • Mothers perceive the baby as intrinsically difficult, resulting in feelings of disappointment in the baby. • Mothers perceive their baby as rejecting. • Mothers experience feelings of rage towards the baby, resulting in fears of losing control and harming or abandoning the baby. • Negative feelings towards the baby are perceived as impacting on mothers' empathy for and bonding with the baby. • Psychological defence mechanisms used to ward off anxiety and maintain self-esteem. 	<ul style="list-style-type: none"> • Mothers feel at the mercy of and controlled by the baby. • Mothers experience physical, emotional and behavioural symptoms associated with fatigue and exhaustion. • Negative feelings towards the baby and the perceived consequences thereof result in feelings of shame and guilt. • Minimising. • Displacement.
<p>Strained marital relations.</p>	<ul style="list-style-type: none"> • Mothers perceive the colic baby as a source of stress in the couple's relationship. • Conflict occurs as a result of mothers' perception of their husbands as abdicating responsibility due to work pressures and/or their inability to cope with the baby, leaving mothers feeling primarily responsible for the baby. • Mothers perceive their husbands' lives as less disrupted by the baby, leading to feelings of resentment. 	<ul style="list-style-type: none"> • The precedence the baby assumes in the mother's mind creates distance in the couple's relationship. • Baby as an intruder in the couple's relationship.
<p>Mothers renegotiate their identity as a woman and mother</p>	<ul style="list-style-type: none"> • The mothering role feels all-consuming, resulting in the loss of a separate psychological identity from the baby. • Mothers' self-image is challenged. • Mothers mourn the loss of a previous identity and lifestyle. • The establishment of a separate psychological space from the baby. 	

An integrated discussion of the findings with quotations follows, together with support from literature. The first category highlights mothers' unmet expectations regarding having a baby.

The real versus the imagined experience of having a baby

During pregnancy, a mother develops ideas of her child and of herself as a mother, which if balanced provide the beginnings of an emotionally secure base for the baby (Cohen & Slade, 2000:27). In this study, the real versus the imagined experience of having a baby does not meet mothers' expectations, leaving them feeling unprepared and out of control: *"I thought it's going to be wonderful and I'm not going to have a crying baby, so when she came out and it was just this screaming all the time, I really had a rude awakening."* Another mother who seemed to struggle with her lack of control over the situation said: *"I had a lot of preconceived ideas of how I was going to bring this baby up, then he ended being colicky and I felt like burning the (parenting) book."* Cohen and Slade (2000:21) report that there are numerous external and internal factors such as age, socio-economic status, support systems, the ability to tolerate negative affect and ambivalence, as well as readiness to form balanced representations of the baby, which determine successful adaptation to pregnancy and motherhood. Mothers' lack of control is compounded by, and contributes to, significant levels of anxiety discussed in the next category.

A colic baby is anxiety provoking

Colic elicits anxieties about the baby being damaged or ill: *"I thought my baby is not normal, something is wrong."* For most, colic was inextricably linked to their infants' difficulty in tolerating the feed, resulting in mothers feeling anxious and ambivalent about the feed: *"It's a vicious cycle; you feed him and it calms him for a few minutes and then he gets more cramps, then he screams some more, so you can't keep on feeding, but then he doesn't get enough food - he's hungry."* Another mother reflected: *"I just wished we didn't have to feed him."* Several studies have shown how anxious a colic baby makes a mother feel (Papoušek & Von Hofacker,

1998:395; Wade *et al.* 2005:352). Lastly, mothers feel anxious about leaving their baby in the care of others: *"Even though he is older, I still worry about the maid and the pool. I have only just started letting her bath him."* In support of this, Stifter and Bono (1998:339) found that mothers of colic infants display more separation anxiety. In addition to anxiety, all mothers battled feelings of failure.

Feelings of failure

Multiple attempts to soothe the baby, or find an effective treatment, leave mothers feeling helpless and inadequate: *"You feel helpless, you can see he's in pain, but you don't know what else to do"*, while mothers' sense of inadequacy is captured in this description: *"It was a sense of total ineffectiveness and now this child was not able to drink properly. He was arching his back, screaming, unhappy, in pain, he had wind, reflux and I thought I'm doing everything wrong."* Stifter and Bono (1998:339) also found that mothers of colic infants felt less competent as mothers.

Over time, feelings of helplessness and inadequacy resulted in feelings of hopelessness and depression related to mothers' perception of colic as interminable and their impotence to effect change: *"I felt that it would never end, the total utter helplessness to the point where you feel that you can't make this better and then losing hope that it would ever come to an end."* This same mother went on to say: *"I reached breaking point and I gave up - this feeling of, 'I can't do any more for you'."* Maxted *et al.* (2005:56) found that moderate to severe depressive symptoms were reported by 42,5% of mothers with a colic infant, which ultimately places the parent-infant relationship at risk.

Several of the mothers had a stressful labour and/or delivery leaving them emotionally vulnerable and compounding their sense of failure: *"The birth was traumatic, I was in a lot of pain. The first day, it's true what they say about post baby blues. I was bad, I couldn't hold him, I couldn't do anything."* Papoušek and Von Hofacker (1998:415) found that prenatal stress and anxiety might prevent a mother from developing self-confidence.

In the midst of grappling with issues around competency, many mothers perceived some advice given by medical professionals, family and friends as a judgement on their ability as a mother: *"Then it's the comments from people, from the paediatrician to my friends. There were times when we went to visit them and looked exhausted and they would say that you could take an antidepressant if YOU'RE not coping. You feel so frustrated because you're trying to explain that anyone in your situation wouldn't be coping."* Later, this mother said: *"I just felt nobody understood where I was coming from, what I was experiencing and what my child was really like."* Long and Johnson (2001:160) support this finding.

However, for many, anxieties about failure undermine mothers' ability to accept support: *"I think it's a fear of admitting failure. You know that sleep deprivation can change your personality but you think if I do get a night nurse, that you're admitting that you can't cope."* This places the parent-infant relationship at risk, given that a lack of emotional and instrumental support that bolsters a mother's self-efficacy and reduces competing tasks, impedes her ability to remain engaged and sensitively responsive to her baby (Crockenberg & Leerkes, 2000:74). Given the perception of the baby's lack of response to its mother's best efforts to soothe it, some participants recalled moments when they did perceive their baby as responsive, reflecting mothers' needs for affirmation from the baby: *"When they brought him he was crying and when I spoke to him he just stopped. That was the best part, he recognised my voice."* Stifter and Bono (1998:347) state that the basis of maternal self-efficacy is rooted in a mother's ability to respond

with success to her infant's needs, a task that is enormously difficult given that colic infants are generally inconsolable. In the face of high levels of anxiety and concern about their competency as a mother, participants employed various psychological defence mechanisms to ward off anxiety and maintain self-esteem. Most commonly, mothers intellectualised their experience: *"I kept saying to people that it was because he was premature, this is normal and it will be fine."* They also split off and suppressed or repressed painful affect: *"I felt this numb frozen feeling looking at him while he was screaming"* and focused on the instrumental aspects of mothering: *"You carry on like a robot dealing with the next non-sleeping, non-eating and fussiness."* The next category explores further efforts on the part of mothers to cope with their colic babies.

Search for an explanation for the colic

The mothers' search for information on the causes of, and treatment for, colic offers hope that understanding and control can be gained: *"We started our cycle of chiropractors, reflexologists, homeopaths, medication for reflux; we changed his formula a hundred times; we have a hundred bottles, a hundred teats; it was this desperate clinging to something."* Long and Johnson (2001:158) support this finding. However, in the search for a cure, conflicting information and advice leaves mothers feeling anxious and overwhelmed. One participant recommended: *"Ask one person. I asked everyone - "help". But at a stage there was too many things. You just couldn't cope."* Most mothers view medical and/or psychological factors as possible causes of, or contributing factors to, colic. Medical factors include prematurity, lactose intolerance and labour and birth complications, while stress during the pregnancy was seen as a psychological factor. With regards to the latter, mothers struggle with feelings of guilt that stressors during their pregnancy may have contributed to their baby having colic: *"I blame myself, because I studied. Sometimes I feel like that stress brought this on."* Furthermore, colic is seen as a punishment for perceived wrongdoings during pregnancy. One mother whose pregnancy was unplanned and unwanted said: *"I felt like I brought this upon him in some way, this (colic) was kind of my*

compensation for him to give him more." Long and Johnson (2001:158) support this finding. Interestingly, Wurmser *et al.* (2006:341) found that prenatal life stress is associated with infant crying/fussing; however, St James-Roberts and Conroy (2005:313) caution that given the problems that have dogged colic research, researchers must be sure of their grounds before making such a claim. As mentioned above, advice offered by medical personnel may be experienced as pejorative. The next category further explores mothers' experience of healthcare professionals.

Disillusionment with medical personnel and profession

Mothers perceive medical personnel as insufficiently supportive or dismissive of their concerns: *"He wasn't latching properly, he was tiny, he was underweight, and I'm a new mommy and they sent me home."* Another mother reported: *"I think there was a lack of communication from the doctor's side."* Most mothers felt disappointed that a cure for colic has not been found: *"With all the technology, I cannot understand how they still don't know how to manage colic."* Research by Long and Johnson (2001:159) supports this finding. Given the above, it is clear that mothers with colic babies need support and emotional containment.

Need for a containing figure

The experience appears to break down mothers' psychological defences, bringing to the fore vulnerabilities and the need to be mothered and contained: *"What helped was my midwife. Although I'm a logical person, when you're so sleep deprived, you can't even think for yourself; you need somebody literally to hold your hand."* Husbands also functioned as an emotional container: *"When he walked in here you would just feel better."* Mothers also felt that practical support is helpful: *"I had a great support system with friends and family, so people helped and cooked meals."* Long and Johnson (2001:159) note that mothers with colic infants need someone to visit and 'be there'. Winnicott (1964:113) highlighted the role of the father in

providing safety and containment for the mother, allowing her to relax her psychological boundaries so as to become attuned to her infant's needs. Some mothers perceived their own mothers as anxious, struggling to contain their daughters' anxieties and prompting the need for a substitute containing mother figure: *"I found my mom, I don't know whether it's because she last changed nappies when we were small, but she didn't have the confidence. My sister just carried on with it."* The next category further describes new mothers' perceptions of their relationship with their mothers.

Mothers reflect on their mothers as women and mothers

During pregnancy, a woman's experience of herself as a child in relation to her mother hopefully gives way to identification with her mother, often allowing women to see their mothers in a more positive light (Cohen & Slade, 2000:27). In line with this, identification with their mothers results in a new understanding of them and of the mother-daughter relationship: *"You actually realise for the first time how much your mother loves you, that they had to go through this process. It gives you a lot of humility. You respect and understand women a lot better and it's an added relationship that you have with your mother - she's now a grandmother and you're now the mother."* Furthermore, mothers draw on their perception of their childhood experiences of their mothers as positive or negative role models of parenting. The following quote provides an example of a positive role model: *"I am going to try and be like my mom was - give my children so much love and attention like she did."* However, some participants tend to idealise their mothers as a psychological defence to resolve possible emotional conflict and ward off anxieties around this relationship: *"My mother is wonderful - what she taught me I would like to teach her."* Later when asked what it was about her mother that made her such a good parent she replied: *"I don't know, just everything."* This defence may place pressure on mothers to live up to what may be an idealised example of parenting. With regards to negative role models, a mother who had been left to cry in a locked room as a young child said: *"So now as soon as she starts crying I try*

and pick her up and try and calm her." Stern (1995:28) notes that through modelling, identification and internalisation, women ultimately learn how to mother from their mothers, for good or ill. Although a detailed analysis of these processes is beyond the scope of this study, it is important to note that mothers' working models of relationships, based in part on their own childhood experiences with parents, affect their perceptions of infant emotions and interpretations of their infants' behaviour (Crockenberg & Leerkes, 2000:72). These perceptions and interpretations are explored in the next category.

Ambivalence towards the baby

For Winnicott (1964:25) the quality of the mother's provision of infant care is based on empathy, or the mother's ability to feel her way into her child's experience. In this study, most mothers demonstrated empathy for their babies: *"Its terrible to see her in pain."* Another described it as *"having really bad heartburn."* However, they also perceive their babies as demanding and endlessly needy: *"Twenty four hours I need to look after him. He was crying and screaming the whole time unless you hold him."* Thus, mothers are left feeling at the mercy of and controlled by the baby: *"Movement consoled him, so as long as you were prepared to jog up and down 24 hours a day it would help, but the minute you stopped he would wake up and start screaming."* Consequently, mothers experience physical, emotional and behavioural symptoms associated with fatigue and exhaustion: *"I think I am tired; I struggle to get up; I am always late; it is as if I am slow."*

Several mothers perceived their baby as intrinsically difficult, resulting in feelings of disappointment in the baby. In comparing her experience to mothers who are perceived as having easier babies, one mother commented: *"I sometimes felt, ooh, I wish that was me, but this is your child and you have to accept what you've got."* Several participants perceived their babies as rejecting: *"Sometimes I felt like even if I was with him the whole day and he was*

crying, then his dad comes in and he might just relax a little bit more, I would notice it and that would hurt me." Although it is no longer accepted that colic exists purely in the eye of the beholder or that factors related to parental care cause persistent crying (Papoušek & Von Hofacker 1998:413), Pauli-Pott *et al.* (2000:130) found that the babies of some mothers who sought medical help for their infants' crying did not meet the Wessel criteria for colic i.e. fussing or crying in an otherwise healthy infant for "at least three hours a day, on three days a week, for at least three consecutive weeks" (Wessel *et al.* 1954:425-426). This suggests that there are psychological or cultural factors at play. Thus, the potential risk for the parent-infant relationship seems to lie in the stressful dynamic between parent and infant factors alike (Stifter *et al.* 2003:309).

Following this, many participants spoke of feelings of rage towards the baby, resulting in fears of losing control and harming or abandoning the baby: *"There were times when you want to throw him against the wall"*, while another participant said that she sometimes felt like *"running away."* Long and Johnson (2001:158) echo this finding. These negative feelings towards the baby are perceived as impacting on a mother's empathy for and bonding with the baby: *"It impacts on bonding with your child."* Later this mother said: *"Its the stress of the relentless screaming. Initially you have sympathy, then it just becomes too annoying to bear. You start thinking that I need to stop this because I now can't stand it."* These negative feelings towards the baby and the perceived consequences result in feelings of shame and guilt: *"There are times when you feel: 'Leave me alone, I don't even want to hold you', and then you feel so bad."* Stifter and Bono (1998:341) state that if mothers continue to perceive their infants as difficult even after the colic has resolved, the attachment relationship may be negatively affected. In this category, several psychological defence mechanisms to ward off anxiety and maintain self-esteem were used, such as minimising the perception of baby as demanding, needy or intrinsically difficult: *"Maybe he wasn't as bad as some of the stories you hear,"* while most mothers displaced their angry

feelings onto their husbands: *"You take it out on people around you. I'd fight with my husband."* Long and Johnson (2001:159) concur with this finding. Following this, the colic baby also has an impact on the marital relationship.

Strained marital relations

Mothers perceive the colic baby as a source of stress in the couple's relationship. Most felt that the precedence the baby assumes in their mind creates distance in the couple's relationship: *"It was just about the baby so we lived past each other"*, while others describe the baby as more of an intruder in the couple's relationship: *"She's really time consuming and I am looking forward to her not sleeping in our bed."* Conflict also occurred as a result of mothers' perception of their husbands as abdicating responsibility due to work pressures and/or their inability to cope with the baby, leaving mothers feeling primarily responsible for the baby: *"He does try and help, but because he's working its been mainly me. I reached a limit where I said to him, 'It's not just my responsibility, I didn't want her all on my own, I'm not a single parent.'"* Another participant said: *"My husband wasn't very good with his screaming because he didn't know how to handle it, so I was basically the only one."* Thus mothers perceive their husbands' lives as less disrupted by the baby, leading to feelings of resentment: *"So he still goes out shopping with his friends, then I get a bit anxious because I'm sitting at home babysitting, so I don't think it's fair."* Several studies have shown families with colic infants experience high levels of anxiety and marital conflict (Long & Johnson, 2001: 157; R ih a *et al.* 1995:206). Lastly, mothers find themselves confronting new and often disconcerting parts of themselves.

Mothers renegotiate their identity as a woman and mother

In becoming a mother, every aspect of a woman's sense of self is reworked. In the last weeks of pregnancy and in the early months following an infant's birth, a mother needs to surrender herself to her baby, while maintaining an autonomous identity (Cohen & Slade, 2000:28).

Participants experienced this loosening of boundaries, resulting in the mothering role feeling all-consuming and the loss of a separate psychological identity from the baby: *"You, as anything more than a mother, takes a backseat. There was no differentiation of me as a person."* Although Winnicott (1964:20) refers to this 'primary maternal preoccupation' as a requirement for mothers to do what they need to do for their baby, it appears that initially, the physical and emotional demands associated with a colic baby may impact on a mother's ability to maintain a separate psychological self while simultaneously merging with the baby. Mothers also found their self-image challenged: *"I never thought I wouldn't cope"* and they mourned the loss of a previous identity and lifestyle: *"Sometimes I just wanted my old life back."* Over time, mothers re-establish their boundaries, allowing for a separate psychological space from the baby: *"I now allow space for myself, for my thoughts and feelings."* Thus, the move from a unitary sense of self, to an identity that encompasses a child, involves instability and then reintegration as new structures of self are formed (Cohen & Slade, 2000:27).

CLINICAL IMPLICATIONS

With the focus of treatment shifting from curing to containing, an opportunity exists for the clinical psychologist to participate in the process of seeing a mother and colic infant through the first few months of their relationship. Parent-infant psychotherapy (PIP) provides a framework for the clinical psychologist to provide psychological support for first-time mothers with colic infants. PIP is a multi-modal method of intervention that utilises combined work with parents and infants, the goal being improved parent-child relationships and child development (Lieberman *et al.* 2000:483). The therapy addresses both conscious and unconscious factors that shape parent and infant interactions (Baradon & Joyce, 2005:25). According to Baradon and Joyce (2005:25), intervention may focus either on enhancing parent functioning in relation to the infant, or on promoting the infant's developmental moves. With regards to the former, Baradon and Joyce (2005:25-26) describe the following objectives:

- To help parents reflect on states of mind in themselves, in their infant and in their relationship. This has a crucial impact on how parents respond to their baby, which in turn is linked to the baby's developing sense of self.
- To help parents regulate their own and their infant's emotional states, given that emotional regulation is an essential component of development.
- To help parents recognise their infant as a dependent person with a developing mind. This may require helping parents cope with infants' initial dependency and later manage the process of separation-individuation.
- To interrupt the repetition of negative intergenerational patterns of relating, thereby diminishing the traumatic impact on the baby.
- To facilitate the couple's parenting of the baby given that coupled collaborative parenting between mother and father supports the infant's development.

Aims that focus on the infant address interactions on the infant's part that may compromise the parent-infant relationship, such as encouraging a baby to re-engage with a parent who may have been withdrawn or intrusive. Lastly, in extreme cases, the therapist assesses any risk to the baby's safety and development, and where necessary works towards the provision of alternative care (Baradon & Joyce, 2005:25-26).

LIMITATIONS

The study only utilised one method of data collection. Including additional methods such as focus groups would have allowed for further confirmation that all aspects of the phenomenon had been tapped.

RECOMMENDATIONS

Firstly, the results highlight the need for the inclusion of a psychological based approach as a resource for first-time mothers with colic infants. However, in the researcher's experience, medical and allied medical professions appear to know little about the potential role of the psychologist in this area. Given that medical doctors are most often the first port of call, the psychologist could work towards developing a relationship with these professionals, providing information about the role a psychologist could play in this area. Secondly, the area of parent-infant psychotherapy could be included as a module in undergraduate and postgraduate courses, creating an awareness of this relatively uncommon field of psychology in South Africa. Lastly, further research could be conducted with respect to the unconscious processes that mediate the experiences of first-time mothers with colic infants, or a project evaluating the effectiveness of parent-infant psychotherapy in providing psychological support to first-time mothers with colic infants could be conducted.

CONCLUSION

The results of this study confirm how stressful the period of colic is for first-time mothers, and indeed for the couple's relationship, which, together with the other difficulties highlighted in the study, may pose a significant risk to the parent-infant relationship and to child development. The problems inherent in adopting an exclusively medical approach to the treatment of colic are also highlighted and call for the inclusion of psychological based interventions as a resource for first-time mothers with colic infants.

REFERENCES

- BARADON, T. & JOYCE, A. 2005. The theory of psychoanalytic parent-infant psychotherapy. (In Baradon, T., ed. *The practice of psychoanalytic parent-infant psychotherapy: claiming the baby*. London: Routledge. p.24-40.)
- BARR, R.G. 1990. The normal crying curve: what do we really know? *Developmental medicine and child neurology*, 32:365-362.
- BRITTEN, N. 2000. Qualitative interviews in health research. (In Pope, C. & Mays, N., eds. *Qualitative research in health care*. 2nd ed. London: BMJ Books. p.11-19.)
- COHEN, L.J. & SLADE, A. 2000. The psychology and psychopathology of pregnancy: reorganisation and transformation. (In Zeanah, C.H., ed. *Handbook of infant mental health*. 2nd ed. New York: The Guilford Press. p.20-36.)
- CRESWELL, J.W. 1994. *Research design: qualitative and quantitative approaches*. California: SAGE.
- CROCKENBERG, S. & LEERKES, E. 2000. Infant social and emotional development in family context. (In Zeanah, C.H., ed. *Handbook of infant mental health*. 2nd ed. New York: The Guilford Press. p.60-90.)
- DEVERS, K.J. & FRANKEL, R.M. 2000. Study design in qualitative research – 2: sampling and data collection strategies. *Education for health*, 13(2):263-271.
- FRANKEL, R.M. & DEVERS, K.J. 2000. Study design in qualitative research – 1: developing questions and assessing resource needs. *Education for health*, 13(2):251-261.
- GIORGI, A. & GIORGI, B. 2003. Phenomenology. (In Smith, J.A., ed. *Qualitative psychology: a practical guide to research methods*. London: SAGE. p.25-50.)
- KREFTING, L. 1991. Rigor in qualitative research: the assessment of trustworthiness. *The American journal of occupational therapy*, 45(3):214-222.

- LIEBERMAN, A., SILVERMAN, R. & PAWL, J.H. 2000. Infant-parent psychotherapy: core concepts and current approaches. (In Zeanah, C.H., ed. Handbook of infant mental health. 2nd ed. New York: The Guilford Press. p.472-484.)
- LINDBERG, L. 2000. Infantile colic: aetiology and prognosis. *Acta paediatrics*, 89:1-2.
- LONG, T. & JOHNSON, M. 2001. Living and coping with excessive infantile crying. *Journal of advanced nursing*, 34(2):155-162.
- MAXTED, A.E., DICKSTEIN, S., MILLER-LONCAR, C., HIGH, P., SPRITZ, B., LIU, J. & LESTER, B.M. 2005. Infant colic and maternal depression. *Infant mental health journal*, 26(1):56-68.
- MCLEOD, J. 2001. Qualitative research in counselling and psychotherapy. London: SAGE.
- MORRIS, M.W., SMITH, S., CRESSMAN, J. & ANCHETA, J. 2000. Evaluation of infants with subdural hematoma who lack external evidence of abuse. *Pediatrics*, 105(3):549-553.
- MULHALL, A. 2003. In the field: notes on observation in qualitative research. *Journal of advanced nursing*, 41(3):303-313.
- PAPOUŠEK, M. & VON HOFACKER, N. 1998. Persistent crying in early infancy: a non-trivial condition of risk for the developing mother-infant relationship. *Child: care health and development*, 24(5):394-424.
- PAULI-POTT, K., BECKER, K., MERTESECKER, T. & BECKMANN, D. 2000. Infants with "colic" – mothers' perspectives on the crying problem. *Journal of psychosomatic research*, 48:125-132.
- RÄIHA, H., LEHTONEN, L. & KORVENRANTA, H. 1995. Family context of infantile colic. *Infant mental health journal*, 16(3):206-217.
- SA HEALTH INFO. 1999. Ethics issues in qualitative research. <http://www.sahealthinfo.org/ethics/ethicsqualitative.htm> Date of Access: 5 April 2006.
- SILVERMAN, D. 2000. Doing qualitative research: a practical handbook. London: SAGE.

- ST JAMES-ROBERTS, I., CONROY, S. & WILSHER, K. 1996. Bases for maternal reports of persistent infant crying and colic behaviour. *Archives of childhood disease*, 75:375-384.
- ST JAMES-ROBERTS, I. & CONROY, S. 2005. Do pregnancy and childbirth adversities predict infant crying and colic? Findings and recommendations. *Neuroscience and biobehavioural reviews*, 29:313-320.
- STERN, D.N. 1995. The motherhood constellation: a unified view of parent-infant psychotherapy. New York: Basic Books.
- STIFTER, C.A. & BONO, M. 1998. The effect of infant colic on maternal self-perceptions and mother-infant attachment. *Child: care, health and development*, 24(5):339-351.
- STIFTER, C.A., BONO, M. & SPINRAD, T.L. 2003. Parent characteristics and conceptualisations associated with the emergence of infant colic. *Journal of reproductive and infant psychology*, 21(4):309-322.
- WADE, K., BLACK, A. & WARD-SMITH, P. 2005. How mothers respond to their crying infant. *Journal of pediatric health care*, 19(6):347-353, November/December.
- WESSEL, M.A., COBB, J.C., JACKSON, E.B., HARRIS, G.S. & DETWILER, A.C. 1954. Paroxysmal fussing in infancy: sometimes called 'colic'. *Pediatrics*, 14:424-434.
- WINNICOTT, D.W. 1964. The child, the family and the outside world. Middlesex: Penguin.
- WURMSER, H., RIEGER, M., DOMOGALLA, C., KAHNT, A., BUCHWALD, J., KOWATSCH, M., KUEHNERT, N., BUSKE-KIRSCHBAUM, A., PAPOUŠEK, M., PIRKE, K. & VON VOSS, H. 2006. Association between life stress during pregnancy and infant crying in the first six months postpartum: a prospective longitudinal study. *Early human development*, 82:341-349.

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