



**An exploration of the psycho-social experience of
mothers who gave birth prematurely in a low socio-
economic context in North West**

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Dissertation accepted in fulfilment of the requirements for the degree
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Preface

Article Format

This mini-dissertation is submitted as part of the Master of Arts degree in Clinical Psychology. It has been prepared according to the article format regulations of the North-West University.

Journal

The candidate opted to compile a manuscript to be submitted to the Journal of Infant Mental Health as her chosen research topic is in line with the aim and scope of the journal. The Journal of Infant Mental Health is a peer-reviewed journal which publishes literary reviews, research articles, programme evaluation studies and book reviews. The focus of the journal is on socio-emotional development, caregiver and infant interactions, and cultural and social influences on infants and families at risk. Appropriate topics for the journal include original research on infants and families at risk from various angles. The research study focuses on mothers whose wellbeing has an impact on the prematurely born infant as well as the family at large. For this reason, the journal was selected for publication of the research article.

The manuscript and the rest of the document are prepared according to the APA 6th Publication Guideline which is in accordance with the requirements set by the Journal of Infant Mental Health.

The pages of the entire document are numbered continuously for ease of reading.

Acknowledgements

I would like to express my heartfelt gratitude to the following:

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Summary

Premature birth is increasing globally. It affects an infant's general, psychological, brain and social development on a short- and long-term basis. Mothers are reported to experience a range of negative emotional outcomes, post-partum depression, post-traumatic stress symptomology, anxiety and depression. Premature birth and separation at birth negatively affect the development of the motherhood identity, which begins when a mother is pregnant and continues to develop after giving birth. Premature birth, as well as the emergence of these emotional difficulties in mothers, affect the normal bonding process between mother and child. Premature birth is prevalent in developing countries like South Africa. The majority of premature births in South Africa are recorded in public institutions which service populations from low socio-economic contexts. Premature birth that occurs in such settings may have the added burden of a lack of resources, unemployment and poverty. While this is so, there is a lack of research studies in developing contexts aimed at understanding the experience of premature birth for mothers.

This study aimed to explore the psycho-social experiences of giving birth prematurely in a low socio-economic context. The study conducted a qualitative research study using a phenomenological design. A purposive sample of mothers who gave birth prematurely in public hospitals in the North West Province was used. In-depth interviews were conducted with seven participants after informed consent was sought. Trustworthiness was ensured by implementing the strategies of credibility, transferability, dependability and confirmability. Ethical principles such as autonomy, confidentiality and a distress protocol were adhered to throughout the research process. Participants had access to psychological debriefing if they needed it. Thematic analysis according to Clarke and Braun was used to analyse the data. Two main themes in the experiences of mothers who gave birth prematurely became

apparent, namely psychological experiences and social experiences. Psychological experiences included experiences of psychological turmoil, disruption in the development of the mother identity, and ambivalent experiences towards the child. Social experiences included the pertinence of paternal support, ambivalent experiences towards the extended family, support from medical and nursing staff and the network of support from other mothers with infants born prematurely. The socio-economic context of the mothers did not seem to make a difference in how they experienced premature birth, more so because the mothers were allowed to stay with their infants in the hospitals at some stage in the hospitalisation. Findings appear to suggest that mothers who give birth prematurely in a low socio-economic context experience the same psychological responses and need the same social relationships as reported in the literature. Mothers are more psychologically distressed during the early stages after giving birth and while the child is in the neonatal intensive care unit (NICU). It is thereby recommended that mothers who give birth prematurely in a public hospital be identified and referred for supportive psychotherapy during the early stages post-partum. Also, formal support groups should be facilitated to enhance their support. Mothers who are at risk of premature birth should be prepared for the outcome of the birth.

Keywords: : *premature birth, mothers, psycho-social experiences, in-depth interview, low socio-economic context*

Opsomming

Voortydige geboorte styg wêreldwyd. Dit raak die algemene, psigologiese, brein- en sosiale ontwikkeling van die baba op 'n korttermyn- en langtermynbasis. Moeders ervaar verskeie negatiewe emosionele uitkomstes, post-partum-depressie, post-traumatische stres-simptomologie, angs en depressie. Voortydige geboorte en skeiding by geboorte beïnvloed die ontwikkeling van die moederskap identiteit, wat begin wanneer 'n moeder swanger is en voortgaan tot die geboorte. Voortydige geboorte en die ontstaan van hierdie emosionele probleme by moeders affekteer die normale bindingsproses tussen moeder en kind. Die meeste voortydige geboortes geskied in ontwikkelende lande soos Suid-Afrika. Die meeste voortydige geboortes in Suid-Afrika word aangeteken in openbare instellings wat bevolkings vanuit lae sosio-ekonomiese kontekste bedien. Voortydige geboorte wat in sulke instellings voorkom, kan 'n bykomende las van 'n gebrek aan hulpbronne, werkloosheid en armoede hê. Terwyl dit so is, is daar 'n gebrek aan navorsingstudies in ontwikkelende kontekste met die doel om die ervaring van vroeggeboorte in moeders te verstaan.

Hierdie studie het ten doel gehad om die psigo-sosiale ervarings van vroeggeboorte te verken in 'n lae sosio-ekonomiese konteks. Die studie het 'n kwalitatiewe navorsingsmetode gevolg met behulp van 'n fenomenologiese ontwerp. 'n Doelgerigte steekproef van moeders wat vroegtydig in openbare hospitale in die Noordwes-provinsie geboorte gegee het, is gebruik. In-diepte onderhouds is gevoer met sewe deelnemers nadat ingeligte toestemming verkry is. Betroubaarheid is verseker deur die strategieë van geloofwaardigheid, oordraagbaarheid, betroubaarheid en bevestigbaarheid te implementeer. Etiese beginsels soos outonomie, vertroulikheid en 'n noodprotokol is nagekom gedurende die navorsingsproses. Deelnemers het toegang tot sielkundige behandeling gehad indien dit nodig sou wees. Tematiese analise volgens Clarke en Braun is gebruik om die data te analiseer. Twee

hooftemas is gevind in die ervarings van moeders wat voortydig geboorte geskenk het, naamlik sielkundige ervarings en sosiale ervarings. Sielkundige ervarings het ingesluit ervarings van sielkundige onrus, ontwigting in die ontwikkeling van die moederidentiteit, en ambivalente ervarings teenoor die kind. Sosiale ervarings het ingesluit die belangrikheid van vaderlike ondersteuning, ambivalente ervarings teenoor die uitgebreide familie, ondersteuning van mediese en verpleegpersoneel en die netwerk van ondersteuning van ander moeders met babas wat vroegtydig gebore is. Dit lyk asof die sosio-ekonomiese konteks van die moeders nie 'n verskil maak het in hoe hulle voortydige geboorte ervaar het nie, meer omdat die ma's in 'n stadium in die hospitaal by hul kinders in die hospitale gebly het. Bevindinge dui daarop dat moeders wat voortydig in 'n lae sosio-ekonomiese konteks geboorte gee, dieselfde sielkundige reaksies ervaar en dieselfde sosiale verhoudings benodig as in die literatuur aangemeld. Moeders is onder intense emosionele druk tydens die vroeë stadiums na geboorte en terwyl die kind in die neonatale intensiewe sorgeenheid is. Daar word dus aanbeveel dat moeders wat voortydig in 'n openbare hospitaal geboorte gee, geïdentifiseer word en verwys word vir ondersteunende psigoterapie in die vroeë post-partum fases. Daarmee saam moet formele ondersteuningsgroepe gefasiliteer word om hul ondersteuning te bevorder. Moeders wat in gevaar is van voortydige geboorte moet voorberei word vir die uitkoms van die geboorte.

Declaration by Researcher

I hereby declare that this research, **“An exploration of the psycho-social experiences of mothers who gave birth prematurely in a low socio-economic context in North West”** is entirely my own work and that all sources have been fully referenced and acknowledged. The research has not been submitted to another institution for examination.



G. Katide

29079810

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Structure of Mini-Dissertation

The mini-dissertation will be submitted in article format, and is structured as follows:

Section 1: This section includes an introduction, a literature review, the rationale of the study, the aim, the research question, methodology and ethical considerations as conceptualised in the proposal.

Section 2: Research article: A qualitative, phenomenological study exploring the psycho-social experiences of mothers who gave birth prematurely within a low socio-economic context in North West. This article will be submitted for publication in the Journal of Infant Mental Health. This section and the reference list at the end of the section were organised in accordance with the guidelines of the abovementioned journal.

Section 3: This section includes a critical reflection on the study.

Guidelines for Authors

The Infant Mental Health Journal is one of the official publications of the World Association for Infant Mental Health. The World Association for Infant Mental Health is a non-profit organisation that aims to promote the mental wellbeing and healthy development of infants globally by generating and distributing scientific knowledge. The World Association for Infant Mental Health takes into consideration cultural, contextual and environmental differences. The Infant Mental Health Journal is copyrighted by the Michigan Association for Infant Mental Health.

Manuscript

Manuscripts should be compiled in the following order: a title page with identifying information; main text; each table; each figure in a.(doc) file type. Manuscripts should include a cover page which reflects the title of the manuscript, name of the author(s), and affiliation of the author(s). The cover page should include any conflicts of interest and funding information. Information about the identity of the author(s) contained in footnotes should appear on the title page only. Manuscripts should be typed double spaced, with sufficient margins of at least one inch or 2.54 centimetres. Manuscripts must be written according to the 6th APA guidelines. The title should appear on the abstract and on the first page of text. All manuscripts should have an abstract of not more than 200 words and should have 3-5 key words. Manuscript may not exceed 10,000 words (inclusive of tables/references/figure captions/footnotes/endnotes). All pages should be numbered consecutively. All manuscripts are required to be scanned for viruses. All tables and figures should be clear

New users should first create an account on the URL <http://mc.manuscriptcentral.com/imhj>, once logged into the system the submissions should be made via the author centre according to the instructions.

Editorial Policy

Manuscripts should include a cover letter requesting review and indicating that the manuscript has not been submitted for publishing elsewhere or previously published. There is no charge for publication of manuscripts in the Infant Mental Health Journal, except for levy charges for changes in proofs. Manuscripts are distributed by the Editor to the Editorial Board members and other invited reviewers with special knowledge of the topic addressed in the manuscript for review. The review process may take up to three months and blind reviewers are used. It is the author's responsibility to submit anonymous files for review. Only the body of the manuscript without identifying details is to be submitted. The Editor retains the right to reject articles that do not meet conventional clinical or scientific ethical standards.

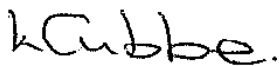
Permission to submit Article for Examination Purposes

This mini-dissertation serves as partial fulfilment for the degree Magister of Artium in Clinical Psychology at the Potchefstroom Campus of the North-West University. We, the supervisors of this study, hereby declare that the article entitled “an exploration of the psycho-social experiences of mothers who have given birth prematurely in a low socio-economic context in North West”, written by Gaogalalelwe Katide reflects the subject matter of the research. The co-authors of the article that forms part of this mini-dissertation, namely Mrs Heleen Coetzee (supervisor and co-author) and Prof. Welma Lubbe (co-supervisor and co-author), hereby give permission to the candidate, Gaogalalelwe Katide, to include the article as part of a master’s dissertation and that the candidate may submit the article for publication in The Journal of Infant Mental Health. The contribution (advisory and supportive) of these two co-authors were kept within reasonable limits, thereby enabling the candidate to submit this mini-dissertation for examination purposes.



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To whom it may concern

This is to testify that the master's dissertation titled

'An exploration of the psycho-social experience of mothers who gave birth prematurely
in a low socio-economic context in North West'

by

Mrs. Gaogalalelwe Katide

has been language edited to the best of the language practitioner's knowledge and ability. Please note that the student requested that the references *not* be professionally edited; the 'References' sections have thus been excluded from the language editing process and the language practitioner cannot take responsibility for any errors found.

The language practitioner in question is registered at the South African Translators' Institute (SATI) with membership number 1003382 and thereby fully qualified and authorised to provide said services.

Should there be any queries, please feel free to contact the language practitioner at the number provided below.

Kind regards

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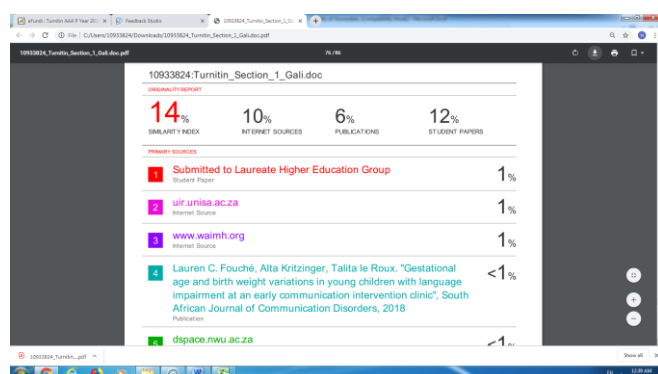
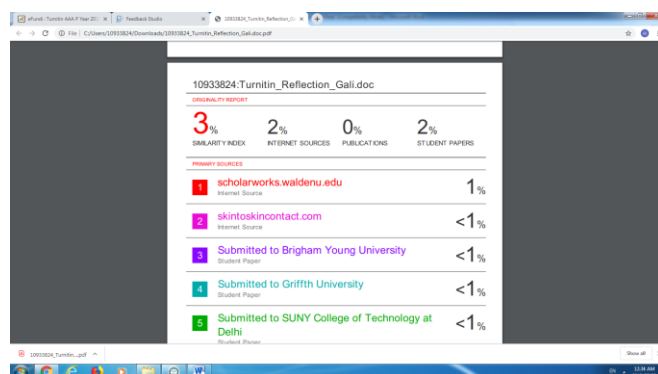
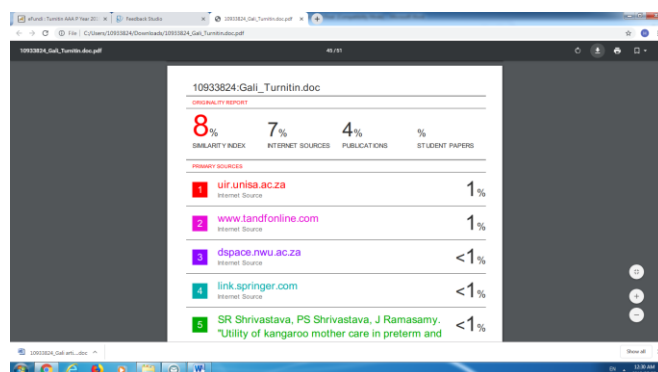
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Turnitin Originality Report

Turnitin check was conducted and the overlap was within reasonable parameters.

There where overlap was indicated it was checked by the study leader and found that it was found to be acceptable and that proper referencing were done appropriately where necessary.

The Turnitin report was generated separately for the 3 sections of the mini-dissertation and the overlap percentages found were: Section 1 Introduction: 15%, Section 2 Article: 8% and Section 3 Reflection: 3%.



SECTION I: Introduction and Contextualisation of the study

Introduction

This introduction aims to contextualise the problem statement by reviewing the literature on the impact of premature birth on mothers. In order to provide context, this section focuses on reviewing the different concepts and how they relate to the experiences of mothers. Furthermore, the relevant concepts as they appear in the title are further expanded upon. Motherhood expectation and identity, the definition of prematurity, the common risk factors of premature birth, the effect on the infant, the mother and the family at large is deliberated. The context of the research is also discussed as well as the research rationale and the methodology which was seen fit for the study.

Premature birth is increasing globally (Baía et al., 2016; World Health Organisation, 2016). Literature implicates the rise in twin pregnancies, assistive reproductive technology and the trend that sees women giving birth at a later stage in their lives. Premature birth affects the child in various developmental areas on a long- and short-term basis. Children who are born prematurely have challenges in the general development domain as well as brain development which affects learning and socialisation. They also face challenges in different mental health areas. Such vulnerable children deserve a nurturing environment in order to thrive.

Concurrently, mothers experience premature birth as traumatic. Premature birth often shatters the idea of the ideal birth and child that a mother dreams about during pregnancy. The literature states that mothers experience a range of emotions, including shock, helplessness, guilt and sadness, and are uncertain about their infant's survival when born prematurely (Ntswane-Lebang & Khoza, 2010; Steyn, Poggenpoel, & Myburgh, 2017). Premature birth and the early separation from the infant thereby affect the mother's psychological wellbeing, as well as the normal bonding process between the mother and the

child (Haji, 2014; Welch et al., 2016). Mothers also suffer an injury to the development of their motherhood identity which further threatens bonding with their infant. A secure bond between the mother and the child is crucial in any mother and child pair as it increases the child's resilience and positively affects their social, cognitive and emotional development (Winston & Chicot, 2016).

Premature birth further affects the familial environment that a child is born into. The parents' relationship may be affected by the birth of a premature infant. The larger family system may also be affected by the birth of the infant. At the same time, these relationships will affect the mother's experience of premature birth.

Most of South Africa's children are born in public institutions, and 12 % of births in public hospitals are premature. There has been an improvement in taking care of the needs of premature children; however, there are no programmes in place to support mothers of prematurely born children sufficiently.

Motherhood and Expectations

Pregnancy is one of the most challenging and important transitions some women will experience in their adult life. Being pregnant and expecting a child influences the mother in totality and impacts on her cognitive, psychological and social functioning (Spinelli et al., 2016). The physiological processes taking place in the mother's body are all focused on preparing her to nurture and take care of this new life growing inside of her (Lasiuk, Comeau, & Newburn-Cook, 2013). A woman's womb is expected to carry the unborn child to a gestational age of 40 weeks; during this time the child's organs are developed and are getting ready to thrive outside the womb (Lasiuk et al., 2013; Ntswane-Lebang & Khoza, 2010). A mother expects to fill the nurturing role that her body is preparing her for when she completes the 40-week gestation period. The body prepares to breastfeed the newly born child and the physiological changes in the body prepare her emotionally and psychologically to mother and nurture the infant. When a child is born prematurely, this expected physiological and normal process of nurturing, bonding and taking care of the newborn is interrupted. This interruption has an impact on many levels of the mother's as well as the child's functioning (Henderson, Carson, & Redshaw, 2016). The motherhood expectations are intricately related to the motherhood identity that develops during the pregnancy and progresses after giving birth. This motherhood identity is also interrupted and affects the mother's wellbeing (Spinelli et al., 2016).

Motherhood Identity

An identity is a person's essential continuous concept of the self (Reber, Allen, & Reber, 2009). Pregnant women alter their identity based on the new stage they are entering. This identity includes the identity they have prior to the pregnancy and giving birth, and it encompasses the changes that a woman is going through. This change in identity

encompasses the roles and functions of nurturing, protecting and responding to the newborn infant (Spinelli et al., 2016). According to Stern (as cited in Spinelli et al., 2016), the psychological development of a mother is much broader than the actual labour experience. It already starts in pregnancy and continues until the first few years of a child's life (Spinelli et al., 2016). The motherhood identity experience is deemed important for the attachment and bonding of the child and mother (Spinelli et al., 2016). This identity development includes themes around physical care and keeping, emotional care and protection of the child, the social relationships that the mother needs to fulfil her maternal role, and transformation of the mother's self-identity as a mother (Spinelli et al., 2016).

A mother's dream and expectation of her newborn and her experience of becoming a mother are perceived differently when an infant is born prematurely (Spinelli et al., 2016). When a mother is pregnant, she feels responsible for nourishing the child growing inside her and thereby keeping the child alive (Spinelli et al., 2016; Stern, 1999). Additionally, when a child is born, a mother normally assumes the role of caregiver which furthers the responsibility of caring for her infant (Stern, 1999). However, this is not possible when a child is born prematurely, as the child's health and life are no longer in the hands of the mother but are taken over by medical personnel and hospital professionals who are more capable to medically care for the infant at this stage (Petty, Whiting, Green, & Fowler, 2018; Spinelli et al., 2016). A child who is born premature needs the intervention of medical staff to stay alive; consequently, the mother's role will be in the background as she allows medical staff to save her infant (Baía et al., 2016). Mothers who give birth prematurely experience parental role loss as there are professionals who understand how to take care of their infants better than they can (Petty et al., 2018). The hospital staff seem to take over the parental role and the mothers have a feeling of powerlessness (Baía et al., 2016). Parents of premature

infants often describe feelings of maternal inadequacy in their roles (Spinelli et al., 2016).

The parental role loss is seen as a major contributor to the emotional turmoil that mothers feel when their children are hospitalised in the NICU (Baía et al., 2016; Gibson, 2016; Heydarpour, Keshavarz, & Bakhtiari, 2017; Jackson, Ternestedt, & Schollin, 2003; Lasiuk et al., 2013).

They experience the loss of a term pregnancy and have to adjust to a new reality (Steyn et al., 2017). On a personal level, mothers experience losses pertaining to their previous identities, previous lifestyles and how they generally order their lives (Goutaudier, Lopez, Séjourné, Denis, & Chabrol, 2011). Additionally, mothers may feel guilty about premature birth and doubt themselves as women and their bodies which were unable to carry the pregnancy to term (Baía et al., 2016; Jackson et al., 2003). Since the birth is sudden and the child is in hospital, the mother spends her time worrying about the child and is therefore unable to fit into the role of motherhood effectively. The maternal role and the self-identity are in suspension until the infant is ready to be discharged and the mother is able to fully assume the motherhood role (Jackson et al., 2003; Petty et al., 2018; Spinelli et al., 2016). As compared to children who are born at term, the birth of a premature infant will affect the alteration of the self-identity and is riddled with challenges and losses (Bener, 2013; Gibson, 2016).

Premature Birth Defined

Premature birth is defined as birth before 37 weeks gestation, or when a child is born at less than 259 days of gestation (Lasiuk et al., 2013; Ncube, Barlow, & Mayers, 2016). Furthermore, there are three specific gestational periods which are used to define prematurity, namely extremely preterm (< 28 weeks), very preterm (28 to < 32 weeks), and moderate to late preterm (32 to < 37 weeks; WHO, 2016). In other literature, premature birth is defined by

the weight of the infant at birth in addition to gestational age. Extremely preterm infants normally weigh between 500 g and 1000 g, while very preterm infants weigh between 1000 g and 1500 g and moderate to late premature infants weigh between 1500 g and 2000 g (Ntswane-Lebang & Khoza, 2010).

Fifteen million infants are born prematurely per year (WHO, 2012). The increase in the number of twin pregnancies, increased use of assistive reproduction technology and an increasing trend of births in women who are older than 34 years of age contribute to the surge of premature births (Beck et al., 2010). The number of infants who survive have increased in recent years because of the technological advances that have been made in the medical field (Forcada-Guex, Borghini, Pierrehumbert, Ansermet, & Muller-Nix, 2011) The context of premature birth in South Africa is discussed at length later in this review. Researchers have endeavoured to identify the most common factors that predispose a mother to premature birth in a bid to intervene and prevent it.

Risk Factors of Premature Births

The causes of premature birth are multifactorial (Sættem, 2015). A few factors found to be related to premature birth have been identified and are discussed below.

Biological and medical factors. Some of the maternal biological factors associated with premature birth are related to diabetes, high blood pressure, obesity or being underweight (Brits et al., 2015). Other medical risk factors which have been identified in different studies include, anaemia, high catecholamine levels in the maternal urine, premature rupture of membranes, vaginal bleeding, urinary tract infection (UTI), previous miscarriages as well as different infections of the uterus (Brits et al., 2015; Chang et al., 2016; Michaluk et al., 2013). Other factors include inter-gestational intervals of less than one year (Roberts & Lain, 1998) and previous premature birth. Twin pregnancies have also been associated with

premature birth, as there can be an increased incidence of premature rupture of membranes, high incidences of pre-eclampsia and intrauterine growth restriction with a twin pregnancy (Ahumada-Barrios & Alvarado, 2016; Michaluk et al., 2013). Twin pregnancy prematurity was associated with a preceding singleton premature birth, therefore alerting that a twin pregnancy should be monitored closely if the preceding pregnancy was a premature one (Michaluk et al., 2013). According to the Foundation for Alcohol Related Research (FARR; as cited in Fouché, 2015), Foetal Alcohol Spectrum Disorder affects 6 % of the South African population. Children born with foetal alcohol syndrome are often born prematurely and are small for their gestational age (Fouché, 2015). Infants born with a syndromic cleft lip are at risk for lower birth weight of up to 600 g less than unaffected infants. Similarly, infants who are exposed to the human immunodeficiency virus (HIV) are at risk for very low birth weight (LBW), atypical length and head circumference, and neurodevelopmental deficits and feeding difficulties associated with HIV-encephalopathy (Fouché, 2015). Furthermore, the maternal age of a mother can be an associative factor to premature birth. Young mothers with a maternal age of less than 20 years as well as mothers with a maternal age of over 35 years have been frequently reported in premature birth (Helle et al., 2015; Roberts & Lain, 1998). Teenage mothers are mostly under-weight and there is a concern of biological immaturity and less prenatal care (Aparna, 2013; Khashan, Baker, & Kenny, 2010). On the other hand, mothers who are over 35 years of age tend to have a higher incidence of gestational diabetes, hypertensive disorders and placenta praevia (Fuchs, Monet, Ducruet, Chaillet, & Audibert, 2018; Kenny et al., 2013).

Social factors. Mothers who are single have a higher incidence of premature birth compared to their married counterparts (Chiabi et al., 2013). Being married has been considered a protective factor in premature birth (Amorim, Silva, Kelly-Irving, & Alves,

2017; Chiabi et al., 2013). This could be explained by the fact that single women often lack the financial and psychological support needed by pregnant mothers to ensure adequate follow-up of their pregnancies as well as to ensure optimal prenatal care (Chiabi et al., 2013). They may also have received reduced health education (Chiabi et al., 2013). Low socioeconomic status has further been associated with premature birth given the lack of prenatal care and poor access to care (Bener, 2013; Kodjebacheva & Sabo, 2016; Wakely, Rae, & Keatinge, 2015).

Psychological factors. Chronic stress is a major contributor to premature birth; however, paternal support seems to modify the impact of chronic stress on the mother (Ghosh, Wilhelm, Dunkel-Schetter, Lombardi, & Ritz, 2010). The stress levels accompanying a lack of resources could also be a precipitating factor to premature birth for both married and unmarried mothers (Kodjebacheva & Sabo, 2016; Roberts & Lain, 1998). Mothers who have an anxious personality, depression and premorbid anxiety have been found to be at an increased risk of giving birth prematurely (Bener, 2013). Mothers who have given birth prematurely in previous pregnancies may be at risk of worrying about the current pregnancy and thereby predisposing themselves to stress and the possibility of a premature birth (Gangi et al., 2013).

While these factors are noted, there is no agreement about the causative factor of premature birth, which makes it difficult for health professions to predict and sufficiently prevent premature birth (Sættem, 2015).

When a child is born prematurely, the medical professionals attend to the infant and attempt to move speedily to save his or her life and provide an optimal environment for growth. The NICU becomes the infant's home until he or she is ready to be discharged.

Neonatal Intensive Care Unit (NICU)

The NICU is a specialised unit which accommodates neonates (Ncube et al., 2016). The parents of the child often spend a considerable amount of time in the unit with their child. Since premature birth is unexpected and sudden, the parents are often at a loss in the unit (Ncube et al., 2016; Wakely et al., 2015). Parents are often fearful and anxious and as a result delay developing a relationship with their children (Ncube et al., 2016). During this time, support from staff, camaraderie with other mothers in the unit and support from the family members enables them to overcome their fear and to develop an emotional connection with their infants (Ncube et al., 2016).

Tandberg, Sandtrø, Vårdal, and Rønnestad (2013) found that the parents were satisfied with the information that was given to them as well as how the staff were taking care of their infants. Ncube et al. (2016) similarly found that parents appreciate the communication from the staff in the NICU. The parents follow the staff cues in the unit to give guidance and reassurance about the children (Tandberg et al., 2013). However, although parents are satisfied with generic information about premature children, they value parental involvement in the caring of their infant as well as being part of the decision making regarding their infant's wellbeing (Tandberg et al., 2013). This information highlights the need for parents to be increasingly involved in the caretaking of their infants in the NICU. When mothers are guided and understand how to take care of their infants, it assists in developing confidence to take on the maternal role and thereby form a bond with their children (Ncube et al., 2016).

Other ways of allowing the parents to be an active part of the child's development and wellbeing are allowing them to do kangaroo care, change diapers, and talk to their children (Flacking et al., 2012; Ntswane-Lebang & Khoza, 2010). Physical closeness is important as it

facilitates bonding with the infant, which is in line with the baby-friendly hospital initiative for neonatal units (Neo-BFHI) which promotes physical closeness and bonding for all infants (Haiek & Semenik, 2014). Flacking et al. (2012) suggest further strategies that can be implemented to enable closeness in the NICU. These strategies include providing chairs and beds within the unit and allowing parents to be an active member of the team. Similarly, a study by Ntswane-Lebang and Khoza (2010) and another by Ncube et al. (2016) recommended that rooming-in facilities to allow mothers to be with their children, as well as psychotherapy and counselling services would be ideal to assist the mothers to cope with their shock and sadness.

The experiences of parental stress while their infant was in the NICU seem to be perceived differently by mothers and fathers (Tandberg et al., 2013). Mothers' stress levels are higher while the infant is admitted, while the fathers' stress levels are higher closer to discharge. The researchers suggest that the mothers' stress levels emanated from being unable to be a primary caregiver but feeling that they need to allow the medical staff to care for their children. It would seem that fathers' stress levels were elevated with the realisation that the infant will need to be taken care of outside the structured environment of the hospital where there are medically trained individuals to care for the infant (Tandberg et al., 2013).

The hospitalisation of the infant in the NICU affects the relationships of the parents (Steyn et al., 2017). The parents experience ambivalence about the hospitalisation. They experience hope, but they also experience feelings of distress, guilt, fear, frustration, envy, anger, jealousy and sadness (Ncube et al., 2016; Steyn et al., 2017). The premature birth and the hospitalisation of a child will affect other relationships in the parents' life. Parents experience challenges regarding the relationship with their spouses, medical staff, other parents of premature infants in the intensive care unit as well as family (Steyn et al., 2017).

This would hamper the support that premature parents need while their children are in hospital. The experience of having a premature child hospitalised is a difficult one, where mothers have to stay in the background and let capable professionals take care of their children as well as balance the relationships with spouses or partners while having challenging emotions to deal with. Mothers were reported to find it difficult to adequately share the progress of the infant in an effort to lessen the apprehension of the family (Steyn et al., 2017). Mothers are often aware of the medical challenges facing the infant which are due to the premature birth.

Effects of Premature Birth on Infants

Premature birth is the leading cause of mortality in infants (Kodjebacheva & Sabo, 2016). Twenty-eight per cent of the mortality of infants globally is due to premature birth (Beck et al., 2010). Premature infants are born before their organs have matured enough for them to survive on their own outside the developmentally supportive environment of the womb (Beck et al., 2010).

Developmental challenges. The morbidity associated with preterm birth often extends to later life, resulting in enormous physical, psychological and economic costs to the country and the family that should take care of the infant (Beck et al., 2010). Premature infants who survive are plagued by developmental challenges like higher rates of cerebral palsy, sensory disintegration, learning disabilities, lower intelligence quotients (IQs), cognitive development difficulties, and respiratory illnesses at a higher rate as compared with children born at term (Kodjebacheva & Sabo, 2016). In a study conducted by Lindmark and Lundqvist (2015), it was found that children who were born prematurely had a lower general cognitive ability than children born at full term. It was found that defects were found in mostly the perceptual and the verbal comprehension domains (Lindmark & Lundqvist, 2015).

Some of the infants suffer from hearing and vision abnormalities. In addition, premature infants are at an increased risk of having cardiac dysfunction (Kodjebacheva & Sabo, 2016). They may also have congenital malformations (Chiabi et al., 2013).

Brain development. When an infant is born prematurely, his or her brain is in a critical stage of development. Studies have found that there are decreased cerebral volumes in early childhood and cortical white matter have smaller volumes in preterm children (Bennet et al., 2013; Ment & Vohr, 2008). The brain of a preterm infant is immature and vulnerable and, therefore, preterm infants are at a risk for abnormal brain development and later developmental problems which stem from the different domains of the brain which might have been affected (Flacking et al., 2012; Ment & Vohr, 2008). According to Bennet et al. (2013), individuals born preterm are at risk of neural development impairment into adulthood and cognitive and behavioural disabilities. It is suggested that the injury to the brain first starts by being born prematurely and, secondly, the stay in a hospital adds to this initial injury as medical procedures are administered to keep the child alive. They are prone to hypoxic-ischemic events which may lead to brain injury (Bennet et al., 2013). Furthermore, Watson (2010) explains that some neuropathways may not develop as expected in prematurely born infants. It is therefore important to continually check whether development occurs as expected and to seek intervention at different times in a prematurely born child's life.

It has been noted that premature infants have large brain plasticity and potential for injury compensation if the deficits are attended to early enough (Flacking et al., 2012). Brain plasticity is the interaction of genes and the environment on the child's development, as well as the potential for changes in brain connectivity (Bennet et al., 2013; Inguaggiato, Sgandurra, & Cioni, 2017). The parent-child relationship, environmental stimuli, nutrition and neuro-endocrine signals play an important role in brain development. Brain development

may be affected by the context the child is raised in and the level of care they receive (Flacking et al., 2012; Inguaggiato et al., 2017).

Mental health challenges. Infants who are born prematurely may suffer from behavioural conditions including attention disorders, autism spectrum disorders and hyperactivity (Kodjebacheva & Sabo, 2016; Lindmark & Lundqvist, 2015). Prematurely born children may particularly struggle with self-regulation, which is governed by the part of the brain that matures during the third trimester of pregnancy (Watson, 2010). Successful regulation is necessary for emotional, social and cognitive aspects (Watson, 2010). A higher incidence of epilepsy, depression and anxiety-related disorders have also been reported in children who have been born prematurely as a result of the brain development which was affected (Lindmark & Lundqvist, 2015). The birth of a premature child and the different challenges of an infant affects mothers in a range of ways (Baía et al., 2016).

Effects of Premature Birth on Mothers

Premature birth affects the infant, the mother and the family in general. When an infant is born prematurely, the mother's expected different domains are affected. Firstly, the ideal pregnancy and birth experience are lost, followed by the expected physiological and normal process of nurturing, bonding, and taking care of the new-born that is interrupted. This interruption has an impact on many levels of the mother as well as the infant's functioning (Henderson et al., 2016). On a psychological level, a new mother experiences a variety of emotions when her child is born prematurely. This includes thoughts such as concern for the survival of the infant, feelings of loss for the suddenly ended pregnancy and, for some, an onset of postpartum depression (Lubbe, 2005; Misund, Nerdrum, Bråten, Pripp, & Diseth, 2013). Mothers who give birth prematurely experience sorrow, anxiety, anger and depression (Bener, 2013; Gray, Edwards, O'Callaghan, & Cuskelly, 2012; Ntswane-Lebang

& Khoza, 2010). Mothers further find that the development of their maternal identity is interrupted and this has an impact on the mother, the child and how the mother relates with others around her. The social relationships of the mothers are also important at this point as the premature birth will affect these relationships. Similarly, the social relationships will also affect how a mother experiences the premature birth and taking care of her infant.

As this study focuses on the psycho-social experiences of mothers in low socio-economic contexts, it is important to take note of that which previous studies internationally found on this topic as a way to contextualise the research. The different effects of premature birth on the mother will be discussed below.

Psychological effects of premature birth on mothers. The psychological functioning of a person refers to his or her behaviour, emotions, social skills and mental status. It also includes motivation and how one engages with one's external environment (Reber et al., 2009). Psychological effects are seen as the impact of something on an individual's psychological functioning which can be influenced by biological and environmental factors (Reber et al., 2009). Traumatic stress can impact a person's psychological functioning in various ways (Swain, Pillay, & Kliewer, 2017). It may impact personal functioning and interpersonal relationships, and it has been linked to post-traumatic stress disorder, anxiety and depression (Swain et al., 2017). Premature birth is seen as traumatic and thereby affects the psychological functioning of a mother who is going through it. Moreover, it was found that there is a relationship between premature birth and the risk of major depressive disorder, post-traumatic stress disorder, anxiety-related disorders, and difficulty with forming a secure bond with the infant in mothers of prematurely born children (see Gray et al., 2012; Misund et al., 2013; Neri, Agostini, Salvatori, Biasini, & Monti, 2015).

Symptoms of Post-Traumatic Stress Disorder (PTSD). Mothers who have experienced premature birth often present with symptoms which include post-traumatic stress disorder symptoms. According to the American Psychiatric Association (2013), post-traumatic stress disorder is part of the trauma and stress-related disorders. The diagnostic criteria include exposure to actual or threatened death or a stressor which can be seen by directly experiencing the traumatic event or seeing another individual experiencing the trauma or finding out that a loved one has experienced the trauma (American Psychiatric Association, 2013). The presence of intrusion symptoms starting to occur after the traumatic event includes recurrent memories, dreams or flashbacks and the avoidance of stimuli associated with the traumatic event or negative alterations in cognitions and mood associated with the event (American Psychiatric Association, 2013).

Mothers who have given birth prematurely have a higher likelihood of presenting with post-traumatic stress disorder symptoms as the birth is sudden and may present with complications (Gray et al., 2012; Misund et al., 2013; Neri et al., 2015). Holditch-Davis et al. (as cited in Wakely et al., 2015) found that all mothers who had given birth prematurely displayed at least one of the three post-traumatic stress disorder criteria, and of the 30 mothers who were interviewed, 16 of them displayed all three criteria. Similarly, in a study by Gondwe and Holditch-Davis (2015), mothers of preterm infants presented with at least one of the post-traumatic symptoms, including re-experiencing, avoidance and hyper-arousal about the traumatic birth experiences, and they had higher posttraumatic symptoms than the mothers of full-term infants. Chang et al. (2016) also found that 25.5 % of mothers of preterm infants had post-traumatic disorder symptoms. Anxiety, fatigue and flashbacks were more common in mothers of preterm children as compared to mothers who had given birth at term (Henderson et al., 2016).

The chances of developing post-traumatic stress disorder after giving birth prematurely are associated with one's premorbid mental health (Goutaudier et al., 2011). The risk factors identified include anxiety symptoms as well as depression before the birth. It was also found that mothers with a predisposition for prenatal depression and anxiety had a lack of adequate coping mechanisms, which put them at higher risk for developing post-traumatic stress disorder. Furthermore, the lower the birth weight of the child, the higher the risk that the mother will present with post-traumatic disorder symptoms (Chang et al., 2016; Gangi et al., 2013; Goutaudier et al., 2011). These findings suggest that not all mothers will present with post-traumatic stress disorder symptoms; however, it is a high possibility when a child is born prematurely that a mother present with these symptoms. This suggests that although people are different and employ different coping mechanisms, premature birth is experienced as traumatic by mothers.

Attachment relationship. Premature birth affects the attachment between a mother and her infant (Flacking et al., 2012; Medina et al., 2018). This is linked with the early and sometimes lengthy separation which disrupts the attachment that has started to develop in pregnancy (Flacking et al., 2012; Gray et al., 2012). Close physical contact at birth is crucial to forming a secure attachment, and premature birth threatens the formation of a secure attachment because of the fear of losing the infant, the impact on the motherhood role and the stress levels that are often seen in mothers who give birth prematurely (Medina et al., 2018). Furthermore, a mother may also feel guilty and have a sense that they have let down their child for giving birth early, and want to protect them, but also feel too numb to react and thereby lose the opportunity to bond with their child. The mental health of the mothers as well as the factors that are present when a child is born further affect their confidence in mothering, and it also affects the quality of their relationship with their infant. If a mother is

struggling with feelings of sadness and guilt, she may not have enough motivation to bond with her child. Additionally, since mothers report ambivalence towards their children, it may also be a factor that adds to the delay of attachment with the infant (Baía et al., 2016; Ncube et al., 2016).

The infants' appearance, as well as the mother's lack of knowledge about the child, is an added factor in forming attachment (Baía et al., 2016). Mothers have been reported to fear touching their infants for fear of hurting them in some way. Mothers are shocked by the way their infants look, as they are small and do not always resemble a healthy newborn infant (Lubbe, 2005). They also feel uncertain about the role they are meant to be playing in the lives of their infants. Mothers experience guilt and sadness as they feel that they have been denied the psychological preparation for birth until the end of the expected pregnancy (Lubbe, 2005; Ncube et al., 2016). The mothers' confidence is affected as they are unable to care for their infant while they are admitted in the NICU.

As discussed above, mothers who give birth prematurely are more likely to present with post-traumatic disorder symptoms which will further affect the attachment between mother and child. A study by Forcada-Guex et al. (2011) explored the links between maternal post-traumatic stress and attachment to the infant. Their results showed that a controlling dyad pattern which was seen more in mothers of prematurely born children was associated with high maternal post-traumatic stress disorder symptoms. This could be based on hypervigilance and sensitivity to the trauma of giving birth prematurely; therefore, the mothers may use a controlling pattern as a way to create security and to be in control (Forcada-Guex et al., 2011).

Based on the factors above which are often at play when a child is born prematurely as well as the hospitalisation, the attachment bond of premature infants and their mothers is influenced (Forcada-Guex et al., 2011; Franklin, 2006).

Postpartum depression and anxiety. According to the American Psychiatric Association (APA; 2013), postpartum depression is seen as part of the major depressive disorder diagnosed with a peripartum onset specifier. Gulamani, Premji, Kanji, and Azam (2013) identify post-partum depression as an affective disorder that includes lack of interest in activities previously enjoyed, insomnia and loss of energy in a mother, starting in pregnancy and continuing until four to six weeks after giving birth. Postpartum depression is linked with marital discord and impaired attachment between mother and child (Sharma & Sharma, 2012; Wilkinson, Anderson, & Wheeler, 2017). In more severe cases, postpartum depression may be linked with psychosis, which may lead to infanticide. During this time, the mother has no interest in nurturing and caring for an infant as the mother has a lack of interest in life in general (Sharma & Sharma, 2012).

Mothers of preterm infants have a significantly higher amount of postnatal depression symptoms as compared to mothers who gave birth at term (Goutaudier et al., 2011; Gray et al., 2012; Helle et al., 2015). The risk of being postnatally depressed is four to 18 times higher in mothers with very low birth weight infants (Helle et al., 2015). Vigod, Villegas, Dennis, and Ross (2010) are of the opinion that the mothers of prematurely born infants are most likely to be depressed in the early post-partum period. This could be based on the fact that, at that time, the children are still hospitalised in the intensive care unit, and it is soon after the traumatic birth which they have not adequately processed.

The risk factors of continued depression in this group included earlier gestational age, lower birth weight, ongoing infant illness/disability and perceived lack of social support

(Vigod et al., 2010). The condition of the child at birth and later seems to be an important factor in the presentation and extended feelings of depression symptoms.

Anxiety. Mothers of prematurely born infants are at a greater risk of anxiety (Bener, 2013; Goutaudier et al., 2011). The anxiety revolves around uncertainty about the infant's wellbeing, a lack of settlement regarding the outcome of the NICU stay, and whether the infant will survive. Mothers who have higher precedence of developing anxiety include young mothers, those less educated, those with a lower body weight and those with a low household income (Goutaudier et al., 2011).

According to the literature reviewed, it is clear that mothers who give birth prematurely experience a variety of negative emotions and affect during the time of their infant's birth, including post-traumatic stress disorder symptoms, post-partum depression, anxiety symptoms as well as difficulty bonding with their infants. The identified risk factors that put these mothers who give birth prematurely at risk of the mental disorders or symptoms include parental age, socioeconomic status and exposure to other stressful life events, maternal trait anxiety and mental health history, severity of infant illness, and gestational age at the birth of the child (Baía et al., 2016; Misund, Nerdrum, & Diseth, 2014). The mother's social relationships are important at this stage and these relationships will impact the experience of the premature birth.

Sociological effects of premature birth. Sociological factors are aspects and circumstances that can influence the way an individual lives (Boardman, Hummer, Padilla, & Powers, 2002). These include the social setting of an individual, their social relationships, and their roles within families, communities and the environment in general (Heydarpour et al., 2017). Premature birth influences a mother's being in totality, including how she relates with the people around her (Treyvaud, 2014). The influence of premature birth on these

relationships including the family, the partnership between couples and the general relationships of the mother will be discussed further.

Family. The birth of a child is a major event in a home (Treyvaud, 2014). A family needs to adjust its routine and adapt to a new member. Siblings need to learn to share their mother with the new infant and in certain instances need to assist in the care of the new infant (Arzani, Valizadeh, Zamanzadeh, & Mohammadi, 2015; Henderson et al., 2016; Treyvaud, 2014). Furthermore, the influence that premature birth can have on the family includes the early adaptation to accommodate the needs of the new child, as well as a change to the everyday routines that a family is accustomed to. Lakshmanan et al. (2017) state that the intensity of care and high level of vigilance required by families to meet the needs of their preterm child make it likely that having a preterm child adversely affects the quality of life of the parents and the family system. The stress that is felt by the parents will often show in the larger family interactions.

Families with very preterm children report higher scores of family dysfunction compared to families whose children were born at term (Treyvaud, Lee, Doyle, & Anderson, 2014). They reported difficulties in problem-solving, communication and clear role definition within the family. This shows that the impact of premature birth influences the family at large and its normal functioning. These difficulties may be due to the vigilance that the whole family maintains in an effort to keep the child safe and healthy. Families often fear that if their children get sick, they may need to be admitted, and thereby go to great lengths to keep the child safe (Gibson, 2016).

Marriage. The parents of prematurely born children reported higher depression symptoms and higher parenting stress (Bener, 2013). Premature birth strains based on the possibility of depression and anxiety-related disorders which may develop, as well as the

spousal relationship and the family functioning will be affected (Treyvaud, 2014). Moreover, parents of prematurely born infants may have less time and energy to spend on each other because they are fatigued with taking care of an infant that needs more care than an infant born at term (Henderson et al., 2016). Premature birth has a negative impact on the marriage and couple relationship as both parents are emotionally strained (Arzani et al., 2015). It has also been reported as a major contributor to the breakdown of the marriage (Treyvaud, 2014). On the other hand, having a stable marriage, maintaining contact with other parents of premature children and having a family religious belief system seem to have a positive impact on the quality of life of these families (Amorim et al., 2017; Baía et al., 2016).

General social relationships. Another health-related social problem that is associated with greater parental and family impact based on premature birth is social isolation (Manning, 2012). The families of prematurely born children experience alienation and social isolation as their experiences of birth and the NICU are different from other families around them. Parents find it difficult to explain to extended families what their experiences are as they are afraid to worry them about the condition of their infants (Manning, 2012; Steyn et al., 2017). As a result, they find the journey of parenting an infant who is hospitalised a lonely one. It is indicated by Steyn et al. (2017) that the parents felt isolated and alone while their premature infants were in the intensive care unit because they had difficulty explaining the different world of the intensive care unit to their loved ones. Premature birth affects the mother as well as the father of the infant.

Effects of premature birth on fathers. In the literature reviewed, it was evident that most of the preterm birth studies are conducted with the mothers, as they are seen as the primary caregivers of the infants. In a study conducted by Helle et al. (2015), the fathers of the prematurely born children reported depressed mood more often than fathers whose

children were born at term (Howe, Sheu, Wang, & Hsu, 2014; Tandberg et al., 2013). This shows that fathers are likewise affected emotionally by the premature birth of their children. It was, however, indicated that while the children are hospitalised, the fathers reported less parental stress compared to the mothers of prematurely born infants. The fathers were satisfied with being able to leave the care of the infants to the staff in the NICU (Tandberg et al., 2013). This may be attributed to the fact that mothers are naturally the active primary caregivers in parenting and fathers often delegate this role to the mothers. Furthermore, the traditional roles of demonstrating masculinity may also contribute to the explanation of self-reports about the hospitalisation being less stressful in fathers (Jackson et al., 2003). Studies show that fathers, however, felt anxious when the child was discharged (Tandberg et al., 2013). In other studies, there was no difference between the parental stress levels between mothers and fathers. The researchers concluded that the paternal role was changing and that fathers are more involved in the wellbeing of their infants than before (Tooten et al., 2013).

Sociological factors cannot be ignored in the experience of premature birth. The impact on the family, the couple's relationship and the general social support system is highlighted. The family needs to adapt its routine to accommodate the newest member of the family. In other instances, the families need to make do without the presence of the mother. The relationship of the mother and father is also affected by the premature birth, exerting strain in the couple's relationship. While this is so, it has been noted that a stable marriage seems to buffer the effects of the premature birth experiences. The quality of the social relationships of a mother will affect the way in which the mother experiences the birth. Similarly, the birth experience will affect the relationships of the mother. The birth affects the father as much as it affects the mother on an emotional level. A mother in a low socio-economic context may have other factors which will affect the experience of premature birth

above her social experiences. The socio-economic status of the mother may have a confounding effect on her social experiences.

Low Socio-economic Context

This study focuses on mothers who gave birth prematurely in a low socio-economic context. Based on the high care that a premature infant needs, the socio-economic status of a family may have an effect on the experience of the birth and the aftermath of the birth. The mothers who are included in the study are those who gave birth in a public hospital. According to Lubbe (2009), parents who give birth in public hospitals in South Africa are stricken with poverty and are often illiterate. Premature birth is a financial cost to the Department of Health systems (Bener, 2013; Gibson, 2016; Lubbe, 2009; Rakhetla & Lubbe, 2016). The high financial costs stand in the way of implementing best practice guidelines that have been identified to have both a short- and long-term positive effect for the infants (Rakhetla & Lubbe, 2016).

Premature birth was reported as having a financial impact on families in previous studies (Akum, 2018; Franklin, 2006; Lakshmanan et al., 2017). In his study conducted in Ghana, Akum (2018) notes that in addition to the emotional strain, the mothers felt that the economic cost of taking care of a premature infant was restrictive. There was a financial cost to travelling between the hospitals and their homes, resigning from their employment to care for the infant, costly infant milk, and family supplies. It is possible that financial implications will affect the experience of the premature birth of mothers.

Prematurity in a Developing Context

The majority of studies conducted on the experiences of premature birth are conducted in developed countries (see Gray et al., 2012; Gray, Edwards, O'Callaghan, Cuskelly, & Gibbons, 2013; Misund et al., 2013; Neri et al., 2015). According to Beck et al.

(2010), the highest incidence of preterm birth is in Africa and Southern Asia. The World Health Organisation (WHO) also reports that premature birth occurs more in developing countries as compared to developed countries (Chiabi et al., 2013; WHO, 2012). One of the countries that has the highest incidence of premature birth in the world is Malawi, estimated at 18.1 % (Sættem, 2015). Prematurity is one of the leading causes of infant deaths and a cause of developmental challenges in developing countries (Chiabi et al., 2013). The management of prematurity is a challenge in developing countries because of limited resources. There are no effective investigative measures for preterm labour and no effective early interventions for prevention. Developing countries are plagued with inequality, lack of resources and poverty (United Nations, 2016). This suggests that the premature births which occur in a developing context may strain the capacity of these communities.

Developing countries have rural communities which are affected more critically by inequality and a lack of resources. According to Wakely et al. (2015), living in a rural community may put a mother at a risk of premature birth given the limited access to health care services. Once they have given birth prematurely, they may encounter reduced health care services and inadequate care (Wakely et al., 2015). The stressors of unemployment and poverty also mean that the limited resources will be strained further in order to ensure adequate care for the premature infant. While this is so, it is possible that these communities may use novel resources that are available to them to take care of the premature infant. In Malawi, rural communities used resources like putting the infant in a hut where there is a fire burning in order to ensure that the infant is kept warm (Sættem, 2015).

Prematurity in South Africa

There is currently a rate of 14.2 % premature births in South Africa (Cordewener & Lubbe, 2017; Fouché, 2015). According to Fouché (2015), prematurity in South Africa puts

children at risk of mortality, neonatal illnesses and neurodevelopmental concerns, both in the short and long term. One million infants are born in South Africa yearly, and more than 80 % of the children born in South Africa are born in the public health care sector (Velaphi & Rhoda, 2012; Visser, Singh, Young, Lewis, & Mckerrow, 2013). According to Visser et al. (2013), more than 12 % of children born in the public sector are premature and weigh less than 2500 g (Visser et al., 2013). Most of the South African hospitals lack adequate resources and do not have specialised care for prematurely born children. According to Velaphi and Rhoda (2012), most of the neonatal mortalities occur in the district and regional hospitals. Prematurity is one of the leading causes of mortalities of children younger than one-month-old. They suggest that the reason children die of prematurity is because of a sub-standard level of care in the public sector (Velaphi & Rhoda, 2012).

While this is so, there have been some strides in the care of premature births. Little Steps is a research-based programme which encourages parents to take on their role as soon as the child is born. NICU Graduates Stars is also a programme that supports parents to assist with the premature child's wellbeing. According to Bankmed (n.d.), Milk Matters collects and supplies breast milk to infants whose mothers are unable to breastfeed them. Similarly, in some public hospitals, baby-friendly initiatives have been established focused on promoting bonding and infant feeding. Some public hospitals have established the kangaroo mother care room as part of an initiative with Johnson & Johnson (Feucht, van Rooyen, Skhosana, & Bergh, 2016). Kangaroo mother care includes securing infants skin-to-skin to their mother's chests. The kangaroo mother care units were set up to enhance the neonatal care at the public district level hospitals in South Africa (Feucht et al., 2016; Shrivastava, Shrivastava, & Ramasamy, 2013). These initiatives assist in reducing mortalities and stabilising physiological functions of the infant (Eun-sook et al., 2016; Feucht et al., 2016).

Although some advances have been made towards protecting the wellbeing of the children, the researcher is not aware of any programmes in place to assist the mothers and parents to deal specifically with the emotional turmoil they experience during and after the birth of their children. In studies that are conducted internationally and nationally, there are few programmes which are specifically tailored for the mother or parents of prematurely born children to assist them to deal with the traumatic aftermath of the birth, adjust to their lives and improve their psychological wellbeing. Gibson (2016) piloted a support intervention for parents which can be used in the NICU of private hospitals in the Gauteng Province to assist parents to cope with the premature birth. Similar programmes adapted to different settings would be beneficial in public hospitals.

Research Context

The research study was carried out in the North West Province of South Africa. North West is one of the nine provinces in South Africa. Most of the economic output is from the mining sector which generates half of the province's income (North West Treasury, 2017). It has a population of approximately 3 787 978 people (North West Treasury, 2017). The languages that are mostly spoken in the North West Province are Setswana, Afrikaans and English. According to the North West Treasury (2017), of the people who live in the North West Province, 69.6 % are African, 27 % are white, and the rest are of other races. The majority of the North West population stay in villages (North West Treasury, 2017). There is no formal employment in these places.

The NICU Graduate Stars Programme is a programme aimed at early detection and early intervention of developmental delays for prematurely born infants who were admitted at a NICU. The programme offers the mothers and the children workshops, screening

assessment for feeding, hearing, language, speech and social interaction and development. The children who are assisted through the programme are of ages ranging from when they were discharged from hospital until 18 months. The NICU Graduate Stars programme is a service that is available to all hospitals with newborn services in the North West Province. At the time of the study, the NICU Graduate Stars Programme was more involved with two settings, i.e., Brits – a district hospital and Klerksdorp – a referral hospital.

Brits is a town in North West. It is a rural farming and mining community 60 km north-west of Pretoria (Pfaff & Couper, 2010). Brits Hospital is a district hospital situated in the Madibeng municipality. Brits hospital serves a population of about 338 262 and has a 267-bed capacity (Monticelli, Chetty, Mbatha, Moyo, & English, 2010; Pfaff & Couper, 2010). There are health centres in the community which refer patients to Brits Hospital when a child is born prematurely for further mother and infant care.

According to Pattinson and Rhoda (2014), there were 106 814 live births recorded in North West from 2012 to 2013. Potchefstroom and the surrounding areas have Klerksdorp Hospital which is the largest referral hospital in the North West Province (Du Preez, 2010). Du Preez (2010) also states that there are more than 380 births that take place per month at Klerksdorp Hospital and, of these births, 45 are premature births. In Potchefstroom Hospital, there are more than 200 births per month and, of these, 90 are premature births.

Rationale of the Study

Numerous quantitative international studies have been conducted to explore the relationship between premature birth and psychological distress in mothers (Gray et al., 2012, 2013; Misund et al., 2013; Neri et al., 2015). Literature states that the majority of premature birth are in developing contexts like South Africa. Fourteen per cent of infants are born prematurely (WHO, 2012) and the majority of children born in South Africa are born in the

public sector (Fouché, 2015). While this is so, insufficient research has been conducted to explore the experiences of mothers who have given birth prematurely in a low socio-economic context which depicts a developing context.

The research study focused on the North West Province of South Africa as it was seen as a fair representation of a population that resides in a rural and low socio-economic context (Du Preez, 2010). Most people are unemployed and there is a lack of formal employment opportunities (North West Treasury, 2017).

The rationale for this study is to better our understanding and capture the unique experiences of mothers who gave birth prematurely within a low socio-economic context in North West, South Africa. The study will highlight psychological and social experiences and challenges within those experiences which are unique to these mothers' context as compared to research which was conducted with participants who gave birth in private hospitals or developed countries (Gibson, 2016; Steyn et al., 2017).

The research findings can contribute to the parent-infant relationship and child development of prematurely born children by assisting the mother to deal with her emotions and curb the possibility of a long-term psychological challenge. By improving the maternal wellbeing of the mother, we could assist to decrease developmental challenges in prematurely born children (Gray et al., 2012; Misund, Nerdrum, & Diseth, 2014; Ncube et al., 2016). By improving the wellbeing of the mother, the bonding process between herself and her child may also improve (Howard & Challacombe, 2018).

Implications for clinical practice may be recommended for the psychologist, counsellor or psychological practitioner with regard to providing psychological support for mothers in public hospitals who may face similar challenges as mothers who participated in

this study, by understanding their experiences and thereby being able to identify mothers at risk and those who would benefit from immediate and long-term intervention.

The Aim of the Study

There are two aims that will be addressed in the study. The first aim of the research study is to explore the psychological experiences of giving birth prematurely, including exploring the emotional, cognitive and behavioural aspect of such experiences. The study secondly sets out to explore the social experiences of the mothers around the time they gave birth prematurely. Social experiences include the roles they filled at this time, the social support of family and spouses or partners they did or did not secure at this time.

Research Question

Following the rationale and the aims of the research study, the main research question was:

What are the psycho-social experiences of mothers of prematurely born children who gave birth in a low socio-economic context?

Methodology

This study will adopt a qualitative, transcendental phenomenology research approach to gain an in-depth insight into the psycho-social experiences of mothers giving birth prematurely. The specific purpose for choosing this method is to eventually describe a common meaning for the participants of their lived experiences of premature birth (Creswell, 2007). This common meaning will assist to understand the essence of the experiences of the mothers who give birth within a low socio-economic context, in order to assist psychologists in practice to understand their experiences.

The research will be undertaken by conducting in-depth interviews with the participants who will be voluntarily recruited into the research. In-depth interviewing is used

when comprehensive information is sought. This information often encompasses personal matters such as lived experiences (Johnson & Rowlands, 2014). Johnson and Rowlands (2014) asserted that an in-depth interview provides the researcher with the advantages of establishing rapport with participants, allowing for flexibility and for the researcher to go into novel areas; thus, a richer, detailed description of data is produced. The two main questions when conducting an in-depth interview in phenomenological studies as suggested by Moustakas (as cited in Creswell, 2007, p. 61) are: “What have you experienced in terms of the phenomenon?” and “What contexts or situation have typically influenced or affected your experiences of the phenomenon?”

In the context of this study, the secondary questions will be guided by the main research question and will be phrased as: “What were your psychological and social experiences around the premature birth of your child/children?” and “What situation affected your experiences of premature birth?” The interviews will be conducted in Setswana, English or Afrikaans.

The participants of the research will include mothers who have given birth in North West. The mothers will have given birth in a public hospital in order to understand the experiences of a low socio-economic context. The participants who will be recruited will be part of the NICU Graduate Stars Programme. The NICU Graduate Stars Programme is a programme that offers the parents of prematurely born children workshops, screening assessment for feeding, hearing, language, speech and social interaction and development within the North West Province. The infants of these mothers will be less than 18 months old at the time of interviews and the children will be discharged from the hospital.

The participants will be recruited through the NICU Graduate Stars Programme. The mothers who show interest in the research will be voluntarily interviewed after informed

consents are signed. All recruited participants will be interviewed. The interviews will be audio-recorded with the consent of the participants. Psychological services will be made available for those who need them.

The interviews will be later transcribed and analysed. Thematic analysis will be employed to analyse the transcribed data. The thematic analysis aims to identify and analyse patterns in qualitative data and also serves to interpret various aspects of a research topic (Clarke & Braun, 2013). The phases of thematic analysis as suggested by Clarke and Braun (2013) will be followed in this study.

Step 1: Familiarising oneself with your data. Firstly, there will be an immersion into the content by reading and re-reading through the transcripts.

Step 2: Generating initial codes. Each transcript will be read thoroughly. Significant words will be highlighted and noted in the process of coding the data. This will be done guided by the aims of the study. A list of all the codes gathered together will be collated. Similar codes will be clustered together and formed into columns that can be arranged into subthemes.

Step 3: Searching for themes: Once codes were highlighted, similar sub-themes will be sorted to identify broader level themes. Data that belong to each theme will be placed in one place and preliminary analysis will then be performed.

Step 4: Reviewing themes. At this stage, the themes will be reviewed to verify whether the themes are based on the data. This will be done by identifying direct quotations which highlighted the different themes.

Step 5: Defining and naming themes. At this point, the themes will be refined and defined and analysis of the data within the identified themes will be undertaken.

Step 6: Interpretation. Interpretation or making sense of the data generated is done at the stage. Moustakas (as cited in Creswell, 2007) adds a further step of representing the essence of the experiences of the participants. This is to explain the structure underlying the collective experiences of the participants. This part of the report will aim to clarify to the reader the collective essence of the experience of the participants

Measures to Ensure Trustworthiness

Measures of trustworthiness are used to enhance a qualitative study. Lincoln and Guba (as cited in Anney, 2014) proposed trustworthiness concerns that are used to ensure rigour in qualitative work. These are credibility, transferability, dependability and conformability. Based on the phenomenological design of the research study, bracketing will be added as a necessary step to ensure trustworthiness. Bracketing is when a researcher suspends their belief to avoid influencing the collection and the interpretation of the data (Groenewald, 2004). An open attitude will be maintained where the researcher stays curious and asks what the new aspects are that can be learned about the phenomenon.

Credibility is defined as how consistent the findings are with reality (Anney, 2014; Lincoln & Guba, 1985). Researchers ensure credibility by iterative questioning. Iterative questioning includes probes and going back to clarify what participants have said before (Shenton, 2004). During the interviews, the researchers will probe to get a clearer understanding of the participant's experience. The supervision sessions will furthermore be used to reflect on the data that is collected to get a clearer sense of it.

Transferability is seen as a possibility of carrying out the same research as conducted in the study in other contexts. Although qualitative research intrinsically does not claim generalisability of the results, it is recommended that researchers explain the context of their research clearly to allow other researchers who believe their research context as similar to the

explained one, to replicate the research study (Lincoln & Guba, 1985; Shenton, 2004). This research study will attempt to give a detailed explanation of the research context.

Dependability is concerned with whether one would obtain the same result if one could conduct the same study twice. Shenton (2004) explains that the study should be reported in detail, so that future researchers are able to repeat the work, if not necessarily to gain the same results. A paper trail of the research process will be kept. It will be possible to produce transcripts and data analysis if required to. The personal reflections will be included in a separate section of this document.

Conformability refers to the degree to which the results of an inquiry could be confirmed and are clearly derived from the data (Anney, 2014). Direct quotations from the interviews will be used to represent the participant's views. The researcher will regularly hand in drafts of the dissertation for supervisory comments to check for researcher bias.

Bracketing is when a researcher suspends their belief to avoid influencing the collection and the interpretation of the data (Groenewald, 2004). The researcher will reflect her own feelings about the experiences of premature birth by identification and temporary setting aside of her assumptions before the interviews begin. Bracketing will further be done in terms of a reflexive journal that the researcher will keep through the research process.

Ethical Considerations

The research study will be conducted in line with the ethical guidelines and principles of Ethics in Health Research: Principles, Processes and Structures (Department of Health, [DOH] 2015). Before the research was conducted, the study obtained ethical approval from the Health Research Ethics Committee of the North-West University, Potchefstroom Campus (NWU- 00080-18-S1). Furthermore, goodwill approval was received from the NICU Graduate Stars Programme to recruit participants in their programme.

According to Hadjistavropoulos and Smythe (2001), risks that are particular to qualitative research are based on the principle of not causing harm to the participants. These ethical concerns include autonomy, beneficence, non-maleficence, confidentiality and informed consent of the participant (Hadjistavropoulos & Smythe, 2001; Terre Blanche, Kelly, & Durrheim, 2010).

In this study, non- maleficence will be ensured by making sure that the participants only divulge what they are comfortable with and that they have access to debriefing if they require it, in order to minimise harm to them. Confidentiality means that no personal information is to be revealed without the participant's consent (Hadjistavropoulos & Smythe, 2001). The researcher will not use identifiers in the data and all information that will be mentioned will not disclose the identity of the participants.

Anonymity will be ensured by making sure that no information will lead back to the individual participants (Terre Blanche et al., 2010).

The voluntary informed consent of the participants will be sought. Informed consent in qualitative research means that the participant must know what is expected of them in advance as well as the clear objectives of the research study. This will be done in a language that the participants understand. According to Hadjistavropoulos & Smythe, (2001), it is important for the researcher to specify in advance which data will be collected and how the data will be used. The nature of the study, the identity of the researcher, the objective of the research, and how the results would be published and used was part of the informed consent discussions. Furthermore, an independent person will seek consent to reduce unnecessary influence from the researcher. An independent person will explain the aims and objective of the research, the process of the research and the potential contribution of the participants in clear language that the participants can understand.

Due to the sensitive nature of the experiences of the participants, there will be a distress protocol that will be put in place. The distress protocol includes that the interview will be terminated if the participant is experiencing anxiety or distress during the interview (Dempsey, Dowling, Larkin, & Murphy, 2016). If the participant would like to take a break and they wish the audio recorder be switched off, it would be done. In this case, the participant will be asked if they would like to continue. The researcher will stay until the participant is calm and composed. The researcher will further refer the participant to debriefing with the participant's consent (Dempsey et al., 2016). The interview times will be communicated with the psychologist and he will be asked to be on standby during the interview times in case he may be needed at that time. The researcher will work under the competent guidance of study leaders to facilitate professional competence.

The researcher will also terminate the interview if she feels that she is experiencing distress during the interviews. She will explain to the participant that she needs a break in order to consider if she can continue with the interview. If it is necessary for her to leave the interview, the study leader will continue the interview and conclude the interview with the participant.

Conclusion

This section reviewed the literature that is published and is relevant to the current study. The main themes which were highlighted include the definition of premature birth, the parents' psychological experiences of premature birth as reported in the literature, and the risk factors which have been identified around giving birth prematurely. The research rationale, question and aims were set out. The next section will include the article manuscript that is part of the document.

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SECTION II: MANUSCRIPT

Article

An exploration of the psycho-social experiences of mothers who gave birth prematurely in a low socio-economic context in North West

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Abstract

The aim of this study was to explore the psycho-social experiences of mothers who gave birth prematurely in a low socio-economic context in the North West Province. This study employed a qualitative phenomenological research design. Seven mothers who gave birth prematurely in a public hospital were purposively sampled and in-depth interviews were conducted. Thematic analysis was used revealing two main themes: 1) psychological experiences, and 2) social experiences. Findings suggested that mothers experienced psychological turmoil in the early postpartum stages and that, due to the hospitalisation and early separation, there was a significant disruption of the motherhood identity. Mothers also experienced a feeling of ambivalence towards the child at different stages, with feelings ranging from resentment and a need to protect to fear of hoping. The mothers' valued social relationships included extended family, medical professionals and the other mothers who had given birth prematurely. There was a particular emphasis on the importance of paternal support. It was recommended that mothers have access to preparatory psycho-education as well as supportive psychotherapy with the aim to build rapport and offer them support, contain their emotions and explore maternal identity. Formal support groups facilitated by a psychological practitioner with mothers who gave birth prematurely is also recommended.

Keywords: *premature birth, mothers, psycho-social experiences, in-depth interview, low socio-economic context*

An exploration of the psycho-social experiences of mothers who gave birth prematurely in a low socio-economic context in North West

Introduction

The preterm birth of an infant comes as an unexpected shock and interrupts the normal developmental processes of the mother. This impacts the psycho-social health of the mother. The mother's capacity to nurture and bond with the infant has an influence on the infant's development. A qualitative understanding of the mother's lived experiences of an infant born preterm can guide the development of appropriate interventions and support.

The premature birth of infants is an increasing phenomenon globally (Henderson, Carson, & Redshaw, 2016). According to the global action report, 15 million infants are born prematurely every year around the world (World Health Organisation, 2012). The reasons for this worldwide increase in preterm births include assistive reproductive care, the mothers' age and an increase in multiple births (Steyn, Poggenpoel, & Myburgh, 2017). Premature birth is defined as when infants are born alive before 37 weeks of pregnancy has been reached (Lasiuk et al., 2013).

Prematurity affects a child on a short- and long-term basis. It is the leading cause of mortality in children and it causes different types of morbidity which affect the child's physical development, brain development and psychological development (Gulamani, Premji, Kanji, & Azam, 2013; Moreira, Magalhães, & Alves, 2014). Since premature birth exposes children to different developmental challenges, they need a nurturing environment in order to form new neuropathways and adequately prepare for life in general (Eun-sook et al., 2016). The basis of this nurturing environment starts with the attachment that should form between the mother and the child (Winston & Chicot, 2016). This attachment is interrupted when a child is born prematurely and may put a child at risk of an insecure bond with their caregivers (Forcada-Guex, Borghini, Pierrehumbert, Ansermet, & Muller-Nix, 2011).

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Mothers experience premature birth as traumatic. Traumatic events lead people to experience psychological distress, which has an impact on their social and psychological functioning (Baía et al., 2016). A new mother experiences a variety of emotions when a premature infant is born; emotions that include shock, sadness, a loss for the suddenly ended pregnancy, concern for her infant's survival, and sometimes an onset of psychological challenges (Lubbe, 2005; Misund, Nerdrum, Bråten, Pripp, & Diseth, 2013). Literature indicates a positive correlation between premature birth and the risk of post-traumatic stress symptoms, depressive disorders and anxiety-related disorders in mothers (Gray, Edwards, O'Callaghan, & Cuskelly, 2012; Gray, Edwards, O'Callaghan, Cuskelly, & Gibbons, 2013; Misund et al., 2013; Neri, Agostini, Salvatori, Biasini, & Monti, 2015). Compared to their full-term counterparts and fathers of premature infants, premature mothers show high levels of stress and depression (Baía et al., 2016; Bener, 2013; Gray et al., 2012, 2013; Neri et al., 2015).

A mother who is depressed, anxious or is presenting with post-traumatic symptoms will have severe challenges in bonding with her child. When an infant is born prematurely, the expected physiological and normal process of nurturing, bonding and taking care of the newborn is interrupted (Baía et al., 2016). This interruption has an impact on many levels of the mother's functioning (Henderson et al., 2016). The motherhood identity which continues to develop after birth is also interrupted (Baía et al., 2016; Spinelli et al., 2016). According to Baía et al. (2016), the high stress levels that are experienced by mothers can be explained by their inability to immediately assume their role as primary caregivers when the infants are hospitalised. They may feel less confident, less competent and confused in their parental roles due to conditions in the neonatal intensive care unit (NICU) that prevent them from interacting with the child (Baía et al., 2016). They may also feel that they are unable to

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protect the child from harm. Mothers may feel that they failed as parents as they were not able to carry the pregnancy until term (Spinelli et al., 2016).

The experience of giving birth prematurely as well as the mother's psychological response to it may influence the mother's social relationships. The relationship between herself and her spouse or partner, as well as the relationships with family and friends, will also affect how she experiences premature birth (Steyn et al., 2017).

Research Rationale

The rationale for this study is to better our understanding and capture the unique lived experiences of mothers who gave birth prematurely within a low socio-economic context in North West, South-Africa. Previous international studies conducted on the relationship between premature birth and psychological and social distress in mothers tend to take on a quantitative approach by making use of psychological tests to measure constructs like depression, anxiety and the prevalence of post-traumatic symptoms (Gray, Edwards, O'Callaghan & Cuskelly, 2012; Gibbons, 2013; Misund, Nerdrum, Braten, Pripp, & Diseth, 2013; Neri, Agostini, Salvatori, Biasini, & Monti, 2015). With the abovementioned argument in mind, it is significant to note that there is a scarcity of qualitative research studies, on a global and national level, exploring the subjective psychological and social effects of premature birth on mothers. Since the majority of premature births occur in developing countries (WHO, 2016), it is imperative to gather data from these contexts to successfully intervene for the mothers and indirectly for the children.

The research study focused on the North West Province in South Africa as it is considered a good representation of a rural and low socio-economic context. Most of the people in North West reside in villages where there is a scarcity of employment (North West Treasury, 2017). According to Statistics South Africa (2015), people living in rural areas are severely affected by poverty. In 2015, the North West Province had dropped to being one of the three poorest provinces in South Africa, with 59 % of households supporting their

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children on child support grants and 91 % of older persons receiving social grants (Statistics South Africa, 2015).

The research will contribute to our understanding of the experiences of the mothers by exploring and describing the emergent emotions and challenges that the mothers may experience after giving birth prematurely. The maternal psychological capacity and well-being are integral in the healthy development of the child (Gray et al., 2012; Misund, Nerdrum, & Diseth, 2014; Ncube et al., 2016). The information gained from this study will help to inform those who are in contact with mothers who give birth prematurely to understand the dynamics of the premature birth on the mother and her child. Well-informed support and interventions can play an integral role in reducing the chances of a long-term psychological challenge for the mother which inadvertently influences the infant-mother relationship. By improving the wellbeing of the mother, we would indirectly assist her to bond with her infant more efficiently (Howard & Challacombe, 2018).

The study will also shed more light on the social systems surrounding the mother during this experience and may have an impact on her and her premature birth experience.

The Aim of the Study and Research Question

The aim of the study was to explore and understand the psychological and social experiences of mothers who gave birth prematurely within a low socio-economic context. The study aimed to better understand the thoughts, feelings, behaviours and social interactions of the mothers regarding the premature birth of their child.

Following these aims, the main research question was: *What are the psycho-social experiences of mothers who gave birth prematurely in a low socio-economic context in the North West Province of South Africa?*

Methodology

Research Design and Approach

This study adopted a qualitative research approach with a phenomenological design. The phenomenological design describes a common meaning for several individuals of their lived experiences of a phenomenon (Creswell, 2007). The aim of the phenomenological study was to explain the essence of the collective experience of the participants.

Participants Sampling

A non-probability purposive sampling method was used to recruit participants. Purposive sampling was used because of the accessibility of the participants and to ensure that the data gathered would sufficiently address the aims of the research (Creswell, 2007; Tongco, 2007).

The sample consisted of mothers who had given birth at a public hospital in the North West Province. The inclusion criteria were mothers whose children were born between 28- and 37-weeks' gestation; the child should have been hospitalised for a minimum of one week in a public hospital; the child should have been at least four months old at the time of the interview to reduce the chance of re-traumatising the mother. The mothers were recruited by an independent person to reduce undue influence by the research team. They were recruited at a workshop held by the NICU Graduate Stars Programme. It was clearly stated that participation was voluntary. The participants had given birth in Klerksdorp Hospital and Brits Hospital. Those were the two sites that the NICU Graduate Stars Programme was mostly involved with at the time of the research.

Brits District Hospital serves a population of 338 262 and has 267 beds (Monticelli, Chetty, Mbatha, Moyo, & English, 2010; Pfaff & Couper, 2010). Approximately 1600 births are recorded at Brits Hospital annually (Molefe, Molete, & Monnana, 2014). Klerksdorp Regional Hospital has approximately 380 births per month and, of these births, 45 are

premature (Du Preez, 2010). The hospital is a referral hospital and serves a population of 334 497.

Data Collection

Seven participants consented to take part in the research study. In-depth interviews were conducted in the homes of the participants at their request. An interview schedule was used to guide the interview. These questions were guided by the main research questions of the study and the phenomenological design of the study. The interviews were audio-recorded with the permission of the participants (Kelly, 2010; Tracy, 2013). The interviews were between 30 and 75 minutes long and were conducted in Setswana; one was in English. Participants' ages ranged from 28 to 43 years. Three of the seven participants were employed. Only one participant was employed in skilled level employment and had obtained a diploma, while others completed their Grade 12. Five of the mothers gave birth between 28 and 32 weeks while two gave birth between 32 and 34 weeks. One was married, while others were in relationships but were not staying with their partners. Most of the participants stayed in the Reconstruction and Developmental Programme (RDP) houses.

Data Analysis

After the interviews, the audio was transcribed verbatim into a word processor. A co-coder coded the data independently and later compared codes with the researcher. Thematic analysis as described by Braun and Clarke was employed to analyse the transcribed data. Initial codes were generated by similar themes; the initial codes were grouped together to form categorical sub-themes which were later collated into the two main themes (Braun & Clarke, 2006; Clarke & Braun, 2013). Finally, the interpretation of the data was done by representing the essence and explaining the structure underlying the collective experiences of the participants (Creswell, 2007). The interview transcript quotations which are used in the report were translated into English.

Ethical Considerations

The study received approval from the Health Research Ethics Committee of the North-West University at the Potchefstroom Campus (NWU- 00080-18-S1). The study also received goodwill permission from the NICU Graduate Stars programme to recruit participants. The interview took place after voluntary informed consent was sought. The participants only divulged what they were comfortable with. An independent person sought consent for the interview. Confidentiality and anonymity were ensured by using participant numbers instead of the participants' real names in the texts.

A distress protocol which included that the interview would be stopped if the participant experienced emotional distress during the interview was in place for the participants and the researcher (Dempsey, Dowling, Larkin, & Murphy, 2016). The participants had access to psychological debriefing if they needed it. Participants will receive feedback on the findings of the research study.

Measures to Ensure Trustworthiness

Credibility, transferability, dependability and conformability were used to ensure rigour (Anney, 2014; Lincoln & Guba, 1985). The researcher probed to make sure that the participant was understood correctly to ensure credibility. A thick description of the research context and participants is given for transferability (Shenton, 2004). A paper trail of the research process is being kept. The audio and transcribed texts are kept safe and it will be possible to produce them and the data analysis process if required. Direct quotations from the interviews are used to represent the participants' views in order to uphold conformability. Since the study was a phenomenological one, bracketing was done through a reflexive journal that the researcher kept through the research process as well as supervision sessions with the study supervisors.

Results

The results of the study are divided into two main themes which were drawn from the data, namely psychological experiences and social experiences. Each of these themes will be briefly discussed in detail below.

Insert Table 1 approximately here

Psychological Experiences

The sub-themes under the theme psychological experiences that emerged from the data were: 1) experiences of psychological turmoil, 2) disruption in the role as a mother and the development of mother identity, and 3) ambivalent experiences towards the child: a process of different stages. These will be discussed below.

Psychological turmoil. The mothers experienced psychological turmoil surrounding the birth of their infant/s and reported emotional responses that included shock, sadness, and self-blame for the premature birth. They were shocked by the wires and drips that their infant was connected to.

P5: *“But it was painful because I found the child in drips, and wires and oxygen. My heart almost stopped. But the sister who was there, consoled me saying that the child will grow.”*

The initial shock that mothers experienced after giving birth to their children was coupled with sadness and feelings of hopelessness.

P5: *“It was very difficult, I was unhappy after he left I even cried, worried about my child wondering what is happening with my life.”*

Mothers also blamed themselves for the premature birth of their children. Some felt that they were stressed during the pregnancy which may have predisposed them to premature birth. Some mothers blamed their bodies for the premature birth of their children.

P2: *“Yes, I blamed myself because I was very lonely while I was pregnant, I never used to leave the house. When my children went to school I would lock and spend my time sleeping.”*

P1: *“just questioned myself like why I can’t carry till birth... till full term”*

Mothers felt that their bodies had let them down and that their bodies failed at keeping the child safe.

This subtheme highlights that the mothers experienced the birth as traumatic and reacted with shock, coupled with sadness. They also blamed their mental states while pregnant for early birth. They furthermore placed blame on their bodies which they perceived as having failed to carry the pregnancy until term.

Disruption in the mother role and the development of mother identity. Mothers were unable to care for their infants because the infants were fragile and needed specialised care. The children were cared for by the medical staff, which prevented the mothers from caring for their own children. The mothers also doubted their ability to be able to take care of a child that needed substantial care. The mothers indicated that they did not spend time with their children while they were in the NICU, because the sisters are busy.

P5: *“There are many children, the ICU is small it’s just enough for them and the sisters and the sisters are busy.”*

Mothers further related their struggle with milk production with the inability to provide for the child and thereby nurture them. The idea that one is unable to physically provide for the child will affect the confidence that a mother has on their ability to nurture that infant. Furthermore, these factors will impact the motherhood identity which will have a detrimental influence on the attachment between a mother and her child.

P5: *“The doctor told me that I should express the milk from the breast. And the milk would not come out because I was too much stressed, the doctor told*

me to take a warm cloth and massage my breasts and try to get the milk out because once my child gets my breast milk he is going to gain weight sooner. Then I tried... the milk would not come."

Mothers additionally felt that their children were not gaining weight because of the mothers' mental states. They believed that their emotional states affected the growth of the infant.

The maternal role is further interrupted by the appearance of the infant which does not fit the idealised one the mother expected. Mothers felt that they had given birth to a less-than-ideal looking infant, which brought on feelings of inadequacy. Although some mothers knew that the child would be small, they were not prepared for what they saw when they met their infants.

P6: "He was so small, his arms and the stomach ... oh my goodness. His hair was dry ... I asked the Doctor is this my child? And he said yes... I asked him if he really came out of me? I was so scared I had to sit down. I then asked them if there was no way that they can switch off the machine. And they said no..."

This subtheme reveals that mothers were unable to take care of their infants after birth as they needed medical attention, and the medical staff took over the caring role.

Furthermore, the mothers felt incapacitated as they struggled to produce milk for the infant, which they perceived as an inability to nurture. The mothers also expressed an intricate connection between their emotional health and the infants' wellbeing. Feelings of inadequacy were present as mothers were confronted by the reality of the appearance of their infants and their wellbeing.

Ambivalent experiences towards the child: a process of different stages. While going through the different stages of the child's admission, some mothers experienced

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ambivalence and inconsistent feelings towards the child. In the beginning, while the mothers were in shock, they reported feeling resentment towards the child.

P1: *"I did, but at some point, I had a feeling of resentment towards him, because I felt that I was going through all of that because of him (child)."*

Mothers later came to accept the child, and the maternal nurturing feeling came to the fore. During this stage, the mothers spent time feeling that they needed to protect and nurture the child. When the mothers were discharged and the child stayed in the NICU, mothers reported feeling a loss as they went back home without a child.

P1: *"But with the second one he was in ICU for 2 weeks, so that separation drove me crazy. I literally felt like I was leaving a part of me behind."*

P6: *"I did not want to leave him. I asked them if I can't take him and then I can bring him every day, or they can come to see him at home?"*

While mothers acknowledged that they were initially shocked and overwhelmed in the early stage of giving birth, they recall how they later felt that their children needed them to be emotionally strong. The mothers expressed a link between their emotional well-being and the health of their child. Some of these perceptions were that they needed not to harbour negative thoughts in order to produce breastmilk for their children.

P7: *"Most of the time I felt that if you are sad it affects the health of the child, and then you find that the child is not gaining weight. If I worry too much. Especially because I give her breast milk, so if I am not well then, she is affected."*

At a later stage when a child was transferred to the kangaroo mother care unit (KMC), the mothers were excited to be with the child and felt like an integral part of the infant's care.

P6: *"when the nurses told me that I must sleep over at the hospital so that I can do kangaroo mother care with my child I was very happy. When sitting*

with him on my chest... I could tell that this child can feel the warmth of his mother now. I am sure my child was wondering where his mother has been.”

The mothers reflected being content when they were reunited with their children. Their moods seemed to improve when they were given the chance to care for their children. However, mothers explained that there was always a possibility that the child could regress and return to the NICU. This realisation caused the mothers to celebrate the progress of the infants with a certain amount of caution. Some participants' infants had to be returned to the NICU due to infections. When a child regresses, the mother re-experiences the trauma that she felt before.

P6: “Then I was told that he needs to go back to the incubator I was so stressed out because now I had to let go of him. I was so upset that I wanted to cry.”

It is during this time that mothers felt that they were unable to hope because they were uncertain about the wellbeing of their infants. The previous content state is kept in suspension as the mother awaits the outcome of the infant's stay in the NICU.

It became clear that the mothers in this study went through a few stages: a stage when they were still in shock and even rejecting the children, and then a stage of acceptance and feeling responsible for the child. At a later stage, the bond between the child and mother seemed to improve when mothers were able to care for their own children. The mothers felt that their children were able to sense their presence and they were content with being with their children all the time.

The psychological experiences theme suggested that mothers experienced a range of negative feelings, including sadness, self-blame and shock. These feelings, the circumstances surrounding the birth, the separation from and the hospitalisation of the infant are related to the perception that a mother has of her capabilities to assume the mothering role. The

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development of the motherhood identity, which is an integral part of becoming a mother and embodying the motherhood experience, is interrupted. This motherhood identity is further intricately related to the relationship with the child. Mothers in this study progressed through different stages in relating to their infants. This relation was affected by fluctuating emotions towards the child until the mother felt secure and confident to take on the mothering role.

Further to the internal processes of the mother, her social environment is an integral part of the experience of premature birth.

Social Experiences

The main themes with regard to the social experiences that emerged from the data were the importance of paternal support, ambivalent experiences towards the extended family, support from medical and nursing staff, and a network of support from other mothers with infants born prematurely.

The importance of paternal support. Some participants felt that paternal support from the father of their children was important. While some participants were still in shock, it was their spouses and partners who were encouraging and supporting them.

P7: “My husband went and saw the child before me and told me she is fine. He was already taking pictures and was very happy. When I went to see her, I was shocked about how small she was... it was only later that I realised that at that moment he was stronger than me emotionally... and I will forever be grateful because it was that calm look in his eyes that gave me the courage to go on...”

There were, however, some participants who felt that they were not sufficiently supported by their partners at this time. They explained that they appreciated the encouragement of their extended family; however, they felt that they needed the father of the infant more during this time.

P1: *"You know... as much as the support system is there I would have wanted him to be there, for him to know what I am going through. But he wasn't you know, and I think that caused a little bit of anger towards him."*

P5: *"I blamed my boyfriend, I had many thoughts ... because he does not stay with me but stays away. I felt that I am stressed because he does not stay with me. I felt that if he was staying with me maybe things would have turned out differently. Had he been supportive, I would have been OK."*

Some mothers who felt unsupported by their partners during the pregnancy blamed the early birth on this unsupportive behaviour. They felt that the stress that was caused by a lack of support from the partners may have predisposed them to premature birth.

Where there was paternal support, it was considered an important social strength which the mothers felt was unequalled, and in instances where this support was lacking, it influenced the mother's psychological functioning in a negative way.

Ambivalent experiences towards the extended family. Most of the participants were surrounded by extended family and felt that they were supported in the experience of giving birth prematurely. Their family support was important and gave them courage.

P1: *"I am very grateful for the support I got... my mom and my sisters were there... I did not feel alone at all."*

Most participants felt that their families including parents, grandparents, children and siblings had played a major role, encouraging them and being there for them at this particularly difficult time. The families took care of their various other roles at home while they spent time in the hospital with the newly born child.

P4: *"My grandmother was with my daughter. I missed her so much that I could not even speak to her on the phone because when I spoke to her on the phone I would cry – my heart was sore."*

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While participants felt that they were adequately supported, they realised that the premature birth of their infants affected the family at large. They also realised that their families encouraged them while they tried to conceal that they were also worried about the infant's wellbeing.

P7: *"But she was also scared because she never used to eat but she hid it from me that she was stressed, especially when I was in the hospital."*

Some participants felt that they needed to be strong for their families and not show that they are emotionally strained.

P1: *"I think I do that with everybody. Not only with kids but I think I kind of want to be the strong one for everyone. So, when it comes to my kids, like the older one I did not want to show him that his brother is sick and it's stressing me out. So, I needed to be the strong one."*

On the other hand, some participants felt that they were not adequately supported by the extended family.

P2: *"Its love from my family, that would have helped me. I felt that my mother was not assisting me in any way at this time."*

The participants who felt that their families were not supportive felt that lack of support was one of the aspects that negatively affected the premature birth experience.

Mothers felt adequately supported by extended family members who were able to assist them with their other roles while they cared for the infant. Notwithstanding, mothers felt that they sometimes needed to be strong for the family as the premature birth emotionally strained the family. Some mothers felt unsupported by their families and felt that this negatively affected their birth experience.

Support from the medical and nursing staff. The participants reflected that they were equally supported by the medical staff, doctors and nursing staff.

P6: *“Yes, this doctor gave me some tips, and said to me if you want your child to grow and leave the hospital you must talk to him. So, I would talk to him and tell him ‘son you need to gain weight because you've got a sister who can't wait to see you.’”*

The participants considered the nursing staff as important people in the care of their children. They explained that the nurses would give them information if they asked for it.

P7: *“They were very friendly. They would explain to you what the drips are for, where it comes from and where it is going to. I think that if you don't talk then maybe they won't talk to you, you need to ask them questions.*

When you are emotional they would come and talk to you and encourage you. They are open.”

The mothers felt that the medical professionals were a real support to them while they were in the hospital. They were able to share information with the mothers. Moreover, they seemed to assist the mothers with encouragement when they were emotional.

A network of support from other mothers with infants born prematurely.

Participants explained that when their infant was transferred to the KMC unit, the mothers were asked to stay with the infants in the hospital. The participants who stayed in the hospital made friends with other mothers whose children were born prematurely.

P5: *“Yes, and the ladies who stayed in the same room with me encouraged me.”*

P3: *“We used to chat and encourage each other and we would also talk to the sisters.”*

They shared rooms, food and other caretaking chores. Mothers indicated that they felt that they were able to support each other at this time. They trusted each other and felt that

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they were faced with a similar goal of taking care of their children who have gone through an unusual experience.

P6: *“Everything is perfect, we carry our children everywhere... it’s only when we needed to bath that we talk to each other and then I will say okay I’m going to bath you take care of my child and we took turns to go and bath.”*

Participants felt that the mothers were the only ones who understood their experiences and valued these relationships. When an infant was transferred to this section, the mothers who were already in the KMC unit encouraged the new mother. These peer mothers were able to assist each other with caring for their children while they took care of personal hygiene.

The social environment of the mothers had an impact on how the mothers experienced premature birth. The mothers perceived the most important support system as the paternal relationship. They further expressed the bearing of the extended families in their experiences. Where the mothers were adequately supported by the extended families, the mothers appreciated the support. This is so although the mothers realised that their families were also negatively affected by premature birth. Some mothers were not supported by the families and felt that it affected their experience negatively. The importance of medical and nursing staff in encouraging and offering information to the mothers was acknowledged. Mothers felt that the social bonds they formed with the other mothers in the hospital were important as the mothers were going through a similar experience.

The findings of the study highlight the psychological and social aspects of the phenomenon of experiencing premature birth. The mothers’ psychological experiences were both internal and external. The internal experiences included negative emotions, the interruption of the motherhood identity which was influenced by the environment, separation from the infant and the feelings towards the infant. The social atmosphere had a bearing on

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the experience of birth. The paternal relationship was identified as important as the mother struggles with the motherhood identity. The family support also set the tone for the experience as mothers found themselves supported while also needing to regulate their emotions to reduce the emotional strain that the family felt. The mothers experienced the hospital staff as supportive and informative and peer support was received from other mothers.

Discussion and Interpretation

The results of this study showed that premature birth and the consequent admission of an infant in the hospital elicited strong psychological experiences from mothers. These included feelings of psychological turmoil, a disruption of the maternal identity and stages of ambivalent feelings towards the infant. These psychological responses were impacted by the mother's perceptions of herself and her environment. Moreover, the research highlighted important aspects of the social experiences of the mother which affected her psychological experiences and, in turn, the experience of premature birth. The mothers felt that the most important social relationship was that of the father of the infant. Social relationships which were also highlighted included the extended family, medical and nursing staff, and the network of mothers who gave birth prematurely.

Following in this section is an in-depth discussion making sense of the main themes that emerged from the data.

Psychological Experiences

Psychological experiences are events that result in a social, cognitive and behavioural impression on an individual (Reber, Allen, & Reber, 2009). Childbirth is an experience that affects the mother holistically, affecting her physically, socially and behaviourally (Olza et al., 2018). A mother has to adjust to the new role and the responsibility that comes with giving birth (Olza et al., 2018). Premature birth has been reported as traumatic, as it often is sudden and unexpected and subsequently disrupts the expectations of the normal process and

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experience of childbirth (Lasiuk et al., 2013; Ncube et al., 2016; Ntswane- Lebang & Khoza, 2010). Mothers of prematurely born children are especially confronted with intense psychological experiences and turmoil when a child is born. This experience often begs some existential questions as the child may be on life support and death is a possibility (Olza et al., 2018). The mothers in this study reported experiencing shock, sadness and blaming themselves for the premature birth. These experiences were similar to those reported in the literature (Gibson, 2016; Goutaudier, Lopez, Séjourné, Denis, & Chabrol, 2011; Haji, 2014; Medina et al., 2018). Mothers of prematurely born children are shocked by the sudden birth of their children and the appearance of their children (Haji, 2014; Lubbe, 2005; Ncube et al., 2016). The birth of a premature child imposes the loss of the ideal child, as the child who is born prematurely does not match the expected child that the mother thought about while pregnant (Veronez, Borghesan, Correa, & Higarashi, 2017). Mothers were also faced with the uncertainty of the survival of their infant (Henderson et al., 2016; Medina et al., 2018). Based on this loss of the perfect child, mothers reacted with sadness and blamed themselves for the premature birth. These emotional responses are consistent with emotions that people feel when they have been confronted with trauma. Feelings of sadness, fear and blaming oneself or assuming responsibility are common (Rockville, 2014; Veronez et al., 2017). Mothers indicated that they were sad as they watched their children in the NICU. According to Gibson (2016), the sadness can also be brought about by the anticipation of a prolonged hospitalisation of the infant.

Some mothers reflected on their mental status while pregnant and concluded that they are responsible for the premature birth, as they experienced negative emotions for various reasons. The perception of being responsible for the premature birth tied in with the loss of the mother role and identity that pregnant women envisaged (Stern, 1999). Pregnant women's identities are altered according to the stage they are in and continue to develop after giving

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birth (Spinelli et al., 2016). This change in identity encompasses the emerging roles and functions of nurturing, protecting, and responding to the newborn infant (Spinelli et al., 2016). The identity shift also includes themes about physical care and keeping, emotional care and general protection of the child (Stern, 1999).

The results of the study suggest that the mothers experienced an interruption in the normal development of their maternal identity as they were unable to assume the maternal role. The literature states that mothers may believe that their body let them down, and were unable to carry the pregnancy to term and thus feelings of guilt were induced (Goutaudier et al., 2011). Mothers felt that their body is not a safe space to nurture and protect their infant (Spinelli et al., 2016). These feelings would further cast doubt on the mother's womanhood and ability as a competent nurturer (Lasiuk et al., 2013).

This interruption of the maternal role was further propelled by the setting of the NICU and the condition of the mothers' infants. Mothers were aware that their infants needed substantial medical care. They stayed for short periods in the NICU because they wanted to stay out of the way as the unit was small and the nurses were busy. According to literature, the mother's role as a caregiver shifts to the background while the medical professionals are caring for the infant (Heydarpour, Keshavarz, & Bakhtiari, 2017). While the mothers understand the importance of the professional role, this affects their confidence as mothers and has an impact on their motherhood identity, which revolves largely around taking care and protecting their infant (Spinelli et al., 2016). While the infant is in the NICU, the mother has limited contact with the infant and, based on that, the mother may feel that she is unable to protect her infant from harm (Baía et al., 2016). Studies have explained that with premature birth, the maternal role and the self-identity are in suspension until the infant is ready to be discharged and the mother is able to fully assume the role of the mother (Jackson, Ternestedt, & Schollin, 2003; Petty, Whiting, Green, & Fowler, 2018; Spinelli et al., 2016).

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The motherhood identity experience is deemed important for the attachment and bonding of the child and mother (Spinelli et al., 2016). When a mother gives birth prematurely, the prolonged separation interrupts the attachment and bonding between a mother and her infant (Forcada-Guex et al., 2011; Haji, 2014; Noren, Nyqvist, & Rubertsson, 2018).

Due to the sudden traumatic experience of premature birth, mothers have inconsistent feelings towards their children. Mothers reported that they first felt unable to accept the child, and even resented them (Gibson, 2016). This was seemingly linked with the feeling of being incompetent and giving birth to a child who is different to the idealised child that the mother may have fantasized about; one mother considered taking her infant off life support machines (Spinelli et al., 2016). While this is so, the mothers also felt that they needed to protect their infants. This was evident when a mother was discharged from hospital and the child remained admitted. Similarly, in a study by Goutaudier et al. (2011), the mothers experienced ambivalence between being deprived of their mother role and an inability to care for their infants and the realisation that the infant will improve and be cared for when hospitalised.

The mixed feelings continued throughout the infant's hospitalisation. In the early stages after birth while the mothers were feeling emotionally heightened, they expressed a link between their emotional well-being and the health of their child. Some of these perceptions were that they needed not to harbour negative thoughts in order to be able to produce breastmilk for their infants. The ability to produce milk is a basic act of nurturing and keeping the infant alive, and the mothers linked it with an ability to provide for their infants (Medina et al., 2018). The mothers were aware that sometimes it was difficult to control their emotions and it was difficult not to feel sad; however, they would feel worried about being able to produce milk. Similarly, Medina et al. (2018) found that when mothers were unable to produce milk, this increased their stress levels, guilt and detachment.

In this study, the mothers later had an opportunity to care for their children on a 24-hour basis while they were in the kangaroo mother care (KMC) unit, after being transferred from the NICU. The hospitals which are represented here advocate kangaroo mother care as one of the core determinants of facilitating the growth and wellbeing of a child (Lasiuk et al., 2013; Shrivastava, Shrivastava, & Ramasamy, 2013). The KMC units were set up to enhance neonatal care at the public district level hospitals in South Africa (Feucht, van Rooyen, Skhosana, & Bergh, 2016). According to the mothers in this study, those who were previously discharged came back to stay with their infants, while those who stayed far were given accommodation in the KMC units. This reduced the financial burden of travelling between these mothers' homes and the hospital.

Kangaroo mother care includes securing infants skin-to-skin to their mother's chest in an upright position by means of a cloth or wrap; it also includes exclusive breastfeeding where possible. (Feucht et al., 2016; Shrivastava et al., 2013). KMC improves growth in low birthweight and preterm infants and inculcates confidence and a better sense of parenting in mothers with regard to their infants' needs (Lasiuk et al., 2013; Shrivastava et al., 2013). During this time, the mothers felt close to their child and felt that they were able to respond to their infants appropriately. It was at this point in the hospitalisation that the mothers expressed feeling better emotionally as they were allowed to care for their children on a full-time basis under the watchful eyes of the medical staff. KMC has been reported to reduce the maternal stress and symptoms of depression in mothers as they have a better understanding and use of their parental role and they feel that they are able to meet their children's needs (Athanasopoulou & Fox, 2014; Medina et al., 2018; Noren et al., 2018; Shrivastava et al., 2013). KMC supports and improves child-mother attachment. Mothers learnt to respond to their children (Noren et al., 2018).

On the other hand, the mothers reported that it was only when the infant is discharged that a mother can feel emotionally better as the feeling of ambivalence does not completely disappear as long as the infant is in hospital. The mothers sometimes felt uncertainty about the progress of their children, as some children would regress and their weight would drop, making the mothers feel that they were unable to hope (Lasiuk et al., 2013).

The emotional responses that are described above are seen when a person experiences tremendous emotional strain (Neri et al., 2015). Mothers do not routinely receive psychological intervention during these times, which might lead to a repression of these emotions (Haji, 2014). The risk of these repressed emotions leading to serious long-term psychological disorders in the future is high (Haji, 2014). Stern (1999) indicated that the mother of a premature child feels like she is broken and disappointed, and experiences herself as having failed. The mother needs a holding space at this point, where she can feel validated (Stern, 1999). The interruption of the mother's role and the ambivalence towards the infant is normal when a mother gives birth prematurely. These factors impact the secure attachment that the infant needs to develop holistically (Winston & Chicot, 2016).

The psychological experiences of the mother need to be addressed to reduce the chance of a long-term mental health challenge and to improve the bond between the mother and the infant. According to Hynan and Hall (2015), counselling and therapy should be conducted while parents are in the NICU as it is more likely to be successful than therapy after discharge. When an infant is discharged, the parents need to return to their daily routine, which may not allow them to frequent the hospital (Hynan & Hall, 2015). While this is so, psychological access is not readily available in developing contexts (Petersen & Lund, 2011). In a report by the South African Depression and Anxiety Group (2009), there is a scarcity of psychological services in rural contexts in South Africa. This may indicate that mothers who

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give birth prematurely may not be identified as needing psychological care unless there are specific programmes that are in place to assist them.

It was also interesting to note that none of the participating mothers mentioned the fact that their child was born in the public sector as a factor influencing her experiences. The well-developed and advanced KMC units in these public hospitals are significant and important to take note of as, according to Gibson (2016), some private hospitals do not have KMC units like in public settings. This unit which was set up to alleviate the medical pressure for beds needed to admit the high-risk infant seems to be a positive psychological factor regarding the reduction of negative emotions and harnessing the bond with the infant (Athanasopoulou & Fox, 2014; Shrivastava et al., 2013). It seems that the KMC unit in public hospitals assists the mothers to later bond with their infants. These facilities are significant in reducing the mortality rates of prematurely born infants (WHO, 2012). Although the financial factors of giving birth prematurely were not highlighted in this study, the kangaroo mother care would reduce the cost of visiting a child in hospital on a daily basis.

The mothers in this study further acknowledged the social relationships which affected their experience of premature birth. These will be discussed below.

Social Experiences

The birth of a child affects the family at large and affects the family on a short- and long-term basis (Lasiuk et al., 2013; Treyvaud, Lee, Doyle, & Anderson, 2014). The experience of premature birth may impact the quality of the social relationships of the mother. The various social relationships that a mother has will also have a bearing on how she experiences premature birth (Spinelli et al., 2016).

It was clear in this research study that the most important social relationship to the mothers during birth was the paternal relationship. This could be because it is not only the mother's identity that changes when a child is born but the father's as well; both individuals

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become parents developing a parental subsystem in addition to the intimate partner subsystem (Tooten et al., 2013). Accordingly, the father of the child is intimately associated with the pregnancy, even before birth. Paternal support was seen to moderate maternal stress during pregnancy and may further decrease maternal stress after a premature birth (Ghosh, Wilhelm, Dunkel-Schetter, Lombardi, & Ritz, 2010). Additionally, paternal support may validate the mother in her motherhood role, as most mothers may be needing the validation at this time (Lasiuk et al., 2013; Richter, Chikovore, & Makusha, 2010). When a mother feels alone and unsupported, it might be interpreted as rejection from the father, and the mothers may feel that they are not good enough mothers (Neri et al., 2015). In the current study, the partner or spousal relationship was important. The mothers who felt that their partners supported them believed that they would not have managed without their support. On the other hand, the mothers who felt that they were not supported by their partners were disappointed. Some reflected on the lack of support from the pregnancy stage and felt that their partner's inability to support them may have contributed to the premature birth. The expectation of the parental system is interrupted and the idea of an ideal father is not realised for the mother (Stern, 1999). According to Redshaw and Henderson (2013), fathers who generally feel less prepared for fatherhood may be less involved with the birth experience and find the transition to parenthood difficult. It is possible that, since the birth is so sudden, the fathers feel less prepared for the experience and become less involved with the mother and the child.

There were other important relationships in a mother's perception at this point. Identity development does not only entail the internal processes of the mother but also the external impact of social relationships (Spinelli et al., 2016; Stern, 1999). According to Stern (as cited in Spinelli et al., 2016), part of a mother's developing identity is affected by the relationships that the mother has with the important women in her life; women like her mother and her grandmother. It also includes the social relationships that the mother needs

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around her to fulfil her maternal role. These are significant social relationships that assist the mother in feeling confident as a mother (Spinelli et al., 2016). These relationships may affect the mother positively or negatively during the experience of premature birth. Since birth is sudden and the child is in hospital, the mother spends her time worrying about the child and is unable to fit into the role of motherhood effectively. If the cultural atmosphere frowns upon mothers who give birth prematurely or if a premature child is seen as a misfortune, the mother will struggle to embody the new identity of being a mother (Spinelli et al., 2016).

In the current study, the familial support system which included the mothers, grandmothers, and siblings was acknowledged. The mothers felt that they would not have coped if their extended families were not supportive. If the mothers in a new mother's circle are positive about the birth and the survival of the infant, the mother may feel adequately supported (Baía et al., 2016). Mothers who have adequate social support are seen to be more positive and able to cope with premature birth (Baía et al., 2016; Crnic, Greenberg, Ragozin, Robinson, & Basbam, 1983; Lasiuk et al., 2013). While this is so, as seen in other studies, mothers felt ambivalence towards the family because it was clear that the family also worried about the infant (Gondwe & Holditch-Davis, 2015; Steyn et al., 2017). When the mothers became aware of this, they felt that they needed to be strong for the family while also regulating their own emotions (Steyn et al., 2017). Similarly, Lasiuk et al. (2013) found that parents were unable to completely explain the setup of the hospital and to share every aspect of the child's wellbeing with extended family as they did not want to worry them.

Some mothers felt that they were not adequately supported by the family through this experience and they felt that had they been supported, the experience of premature birth would have been better manageable. This support may have an impact on the mother's perception of herself as a mother and the ability to care for a child (Spinelli et al., 2016).

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While the infant was hospitalised, the “other” social relationships outside the hospital were experienced as an important source of encouragement, whereas the in-hospital relationships with the medical staff and nurses were experienced as instrumental in the mother’s well-being and smooth transition into the development of the mother identity. The medical staff and the nursing staff are constantly with the infant and have an in-depth understanding of the situation and wellbeing of the child, therefore the support of medical staff is imperative (Ntswane- Lebang & Khoza, 2010). The medical staff take on the parental role while the child is in the intensive care unit (Goutaudier et al., 2011). According to literature, mothers look to the medical staff for guidance and cues to understand what their children are going through (Goutaudier et al., 2011; Ncube et al., 2016). The medical staff’s support and proper open communication were seen to be essential for the mothers’ well-being. According to Tandberg et al. (2013), open communication and positive interactions from the nurses create a sense of safety and partnership for the mothers (Ncube et al., 2016). In this study, the mothers felt that a mother should ask questions in order to get the best support and information from the medical staff. Mothers are seen to accumulate more information while their children are in the hospital when they interact with the nursing and medical staff (Tandberg et al., 2013). During the transitory phase of the kangaroo mother care, the nursing staff assist the mothers to develop necessary skills to care for their infants, and this improves the confidence of the mothers before the children are discharged. The nursing staff’s cooperation and sharing of information are seen as important to the mothers as it further helps to facilitate bonding and the relationship with the child as well as help the mother to be a part of the child's process in the hospital (Ncube et al., 2016).

The other group of people who understand the situation of the premature infant are fellow mothers who have given birth prematurely, as they understand the unspoken fear of regression and everyday progress (Ncube et al., 2016). The mothers in this study expressed

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that they drew encouragement from other mothers who were in the hospital and had given birth prematurely as well. Similarly, in their study, Ncube et al. (2016) found that mothers were a support system for each other in the unit. The mothers formed a network with other mothers as they felt that they understood their experience. Some of these relationships continued after the discharge of the infant.

Since the premature birth of an infant affects the social relationships of the mother, the social support that is around her at this time is important. Paternal support was deemed paramount in allowing supported mothers to cope better with the premature birth, while the unsupported mothers felt discontented about the lack of support. In the study by Ncube et al. (2016), which was conducted in a developing context, the fathers were absent and it was ascribed to the cultural context where fathers are not primary caregivers. Jones (as cited in Redshaw & Henderson, 2013) found that there were higher rates of uninvolved fathers around the birth of their infants in contexts where there was high unemployment and low income. Also, according to Richter et al. (2010), South Africa has the second highest rate of father absence in Africa. Furthermore, in a developing context like South Africa, fathers may not be available to support their partners because they are unemployed or because they stay away from home for work reasons (Human Science Research Council, 2018; Richter et al., 2010). It is important to make fathers aware of the importance of their support when a child is born prematurely.

In a public hospital context where resources are limited, it is imperative to train nursing staff to identify mothers who need assistance and refer them to psychological services while they are in the hospital (WHO, 2012). According to Ncube et al. (2016), a casual social interaction where a nurse engages the mother not only in the infant's care but in life, in general, may assist the mother to build a trusting relationship with the nurse.

Family support also impacts the maternal identity that the mother is developing (Spinelli et al., 2016). The family's response to the premature birth will affect how a mother takes on the role of mothering her infant (Spinelli et al., 2016). Most families are close-knit in developing countries and the culture of the family has an impact on the family support that a mother will have (Gondwe & Holditch-Davis, 2015). If the family regards the infant as a blessing, a mother will be sufficiently supported. A network of mothers who have been in a similar position to offer encouragement is imperative, especially between mothers who may share a cultural background.

Recommendations

It became clear that mothers go through different stages as they adapt to the premature birth of their children. The initial stage is characterised by shock and emotionality. It would therefore be recommended that the mothers of prematurely born children be assisted through referral to a psychologist or counsellor during the early stages of the birth of their children to enable them to express and integrate those feelings in a safe space. Individual supportive psychotherapy should be offered in a bid to explore the motherhood identity development and interruption, contain emotions, and explore the ambivalent development of the relationship with the infant. Psychotherapy could also offer rapport to mothers and thereby offer additional social support, especially for the mothers who may not have paternal or familial support.

Mothers who are at risk of giving birth prematurely may also be psychologically prepared and psycho-educated about what to expect after the child has been born; particularly regarding what their children may look like and the setting of the NICU.

Formal support groups could be initiated with mothers who gave birth prematurely, as they are able to find support from each other. This could assist them to normalise their emotions and enable them to learn adaptive coping skills in a safe space. Support groups can

be continued after discharge where mothers can meet on a specific day to check in and explore any challenges with the infant after discharge.

The results from this study in a low socio-economic setting are mostly comparable to the results as described in the literature for higher socio-economic settings. This should allow future researchers and clinicians to test and adapt current support programmes and ensure that it is contextualised for the low socio-economic setting.

Limitations

- Since the study was a qualitative study, the results of the study should be interpreted in this context. They may not be generalised to other contexts.
- Participants were Setswana-speaking – there were no English- or Afrikaans-speaking participants included in this research study.
- There were challenges in the recruitment of participants as the NICU Graduate Stars Programme is not equally involved with all the public hospitals at all times. There were potential participants who were not comfortable with taking part in the research for various reasons and therefore declined participation. Only participants who consented were included.
- Setswana was used as the main language of data-collection. The transcription was done in Setswana and then sections of the interviews which were used were translated into English. This process extended the analysis period.
- Furthermore, some mothers gave birth to very premature infants (28 weeks gestation) and some gave birth to late premature infants (34 weeks gestation). It is possible that the outcome of the research may have been different had it been conducted with a homogenous group. It was clear that the mothers who gave birth very prematurely experienced more emotional turmoil and spent more time in the hospital than the late premature infants' mothers.

Conclusion

The current study was conducted with mothers in a rural environment who had given birth in a public hospital in the North West Province. The study focused on two major themes, namely the psychological and social experiences of mothers giving birth prematurely within this identified context. In the current study, the mothers reported emotional turmoil that included shock, sadness and self-blame. These emotions had an impact on the view that mothers had on their ability to nurture and care for their infant, and thereby had a tremendous effect on the developing motherhood identity. The mothers also found that their emotions and bonding relationship with the infants fluctuated depending on the different stages that the child went through, resulting in ambivalence which was characterised by a fear of hoping and a need to mother. It was also evident that the mother's social relationships were of significant importance during this challenging time in their lives. Emphasis was on the importance especially of the support system that could be offered by the father of the child. Familial support, medical staff and the network that was formed with other mothers were critical in how the premature birth was experienced.

Mothers can be supported psychologically through the early stages after the birth of their children through psycho-education and supportive psychotherapy to contain different emotions, build rapport and explore the motherhood identity and the feelings of ambivalence towards the infant. It is important that the experiences of the mothers be acknowledged and lessons be learnt to support their psychological wellbeing and indirectly the overall wellbeing of their infants. Furthermore, mothers may be prepared for the possible emotions, the appearance of their infant and the neonatal intensive care setup. Formal support groups may be considered as a way to offer support and build a network that can continue after discharge.

The results from this study were comparable to the results as described in the literature, which could allow future research to test current support programmes used in high socio-economic settings for use in South African low socio-economic settings.

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Section III: Critical Reflection on Conducting the Study

Introduction

This study set out to explore the psycho-social experiences of giving birth prematurely in a low socio-economic context in North West. A qualitative research approach employing a phenomenological design was used to gather the essence of the experiences in these mothers. In-depth interviews were conducted which allowed for a common theme to be collated from the participants. In the following section, a personal reflection from the researcher, a critical reflection on the research study, limitations and recommendations for practice and for further research will be discussed.

Personal Reflection

The researcher has personal experience of giving birth prematurely, therefore it is acknowledged that the motivation for the research was partly due to a personal experience (Tufford & Newman, 2012; Zenobia, Fung, & Chien, 2013). When the research study was proposed and a phenomenological research design seemed fitting, it was important to reflexively engage with the preconceived biases and ideas on the topic. It was important to reflect whether the researcher would be willing to listen with humility and curiosity, and would not constantly compare her experience with the participants' experiences (Zenobia et al., 2013). The research was conducted with mothers who gave birth in a public hospital, which is a different context to what the researcher experienced and there was no way of predicting the results of the research (Zenobia et al., 2013). It was important, therefore, to enter the research context with an open mind.

The seeking of informed consent took place at different meetings of the NICU Graduate Stars Programme workshops. After the NICU Stars Graduate Programme representatives presented interactive workshops with the mothers, the researcher introduced the research and then left the venue. Thereafter, the independent person proceeded to explain the research objectives and the process of participating. The potential participants were

encouraged to think about participating before consenting. A period of 24 hours was allocated to allow them to come to a comfortable decision about participating. There were participants who immediately signed the informed consent and started to discuss the logistics of the interviews, while other potential participants decided to decline participation on an immediate effect. It was made clear that participating will not affect their involvement with NICU Graduate Stars.

Before the interviews, it was important to mentally prepare for the interview, and to suspend the preconceived ideas the researcher may have had about the experiences of the birth and the possible challenges that the mothers may have had based on their socio-economic statuses.

The data collection occurred according to the personal schedule of the individual participants. It was important to allow them to decide where they would like to be interviewed. Their infants were an average of four months old, which meant that they still needed considerable care. Those who were employed were on maternity leave. Participants were willing to take part in the research study provided that the researcher was willing to conduct the interviews in their homes. It was important to reflect on the deviation from the proposed logistical arrangements. While this was so, it was important to realise that the mother's homes are a place where they are most comfortable and that allow them to be with their infant/s and not to worry about them while taking part in the interview. Some participants were eager to introduce the researcher to the family members and partners who were their support systems. It was imperative to enter these homes with respect and allow participants to lead the way regarding where to be interviewed and to choose the most comfortable language for themselves. The mothers often offered for the researcher to see the infants and sometimes to pick them up. Only after the interviews would the researcher share that she has also had an experience of giving birth prematurely. This self-sharing was only

done with a few participants who had asked direct questions to the researcher. It was important not to engage in such conversations while conducting the interview which may have tainted the interviews by participants not telling their stories and assuming the researcher already knows what their experience was. This would have blocked valuable information regarding the specific details of the experiences. While this is so, since the researcher was familiar with the neonatal intensive care unit, it was an advantage since questions asked and how they were asked allowed to gather a rich and thick description of the experiences.

The interviews were conducted with mothers in Klerksdorp and some in Brits townships. It was sometimes unsatisfying to drive between the two towns without a coordinated schedule. One interview was cancelled after the researcher had driven to Klerksdorp for an interview and the participant's phone was out of service.

During the proposal phase, a set of questions were suggested to guide the interview; however, during data collection, the researcher relied on probing and the participant's cues were followed instead (Zenobia et al., 2013). During the interviews, the participants sometimes related issues which were not seen as relevant to the research study; it was important to listen and allow the participant to relate what they felt was important for them at that point and then respectfully revert to the relevant topics. One participant was going through a divorce at the time of the interview and it was clear that the divorce was in her foreground.

After every interview, notes that were taken during the interview were dated and reflections of the main themes of the interview as well as the thoughts of the researcher were documented (Dempsey, Dowling, Larkin, & Murphy, 2016). A discussion with the supervisor and the co-supervisors were done to reflect on the different themes which seemed to surface from the data.

During analysis, the audio was transcribed in the language that was used in the interview. A re-reading of the transcripts assisted the researcher to make sense of the themes. The transcripts, as well as the audio files, were shared with the co-coder for coding purposes. A discussion of the main themes took place and a comparison of the codes was done. Some themes and the connectedness of the themes became clear after reflecting on the suspended ideas the researcher had and on the data. For instance, the realisation that the public hospitals housed mothers in the hospitals to perform kangaroo mother care (KMC) with their infants while the private hospitals did not have such setups was unexpected (Gibson, 2016). Also, the research did not highlight the burden of the low socio-economic context as was expected at the beginning of the research. The (KMC) units where mothers stay with their children, assist the hospital to release space in the intensive care unit and thereby accommodate more infants who are up-referred and need intensive care. These units inadvertently becomes the tool to assist the mothers to reduce negative affect and boost maternal confidence (Athanasopoulou & Fox, 2014; Feucht, van Rooyen, Skhosana, & Bergh, 2016). The provincial Department of Health in the North West Province has been under administration, and it would be expected that the hospital service or follow-up services would reflect it; however, mothers felt well taken care of (North West Provincial Health, 2018).

During the report writing, it was important to identify the themes that surfaced as truly those of the participants, and not to highlight themes which may confirm the researcher's preconceptions and personal experience. A re-reading of the transcripts was imperative at this point and to ensure that the quotations that were used in the report reflected the essence of the participants' experiences (Tufford & Newman, 2012).

Critical Reflection on the Experiences of Giving Birth Prematurely

Not all pregnancies will be uneventful; similarly, not all births will be as anticipated. Giving birth to a child has a lasting effect on a mother; it changes the way a woman relates

and alters that woman's identity, whether it is a first or subsequent birth (Heydarpour, Keshavarz, & Bakhtiari, 2017). The experience of giving birth prematurely is certain to leave a long-term impact on both the mother who delivered early, the child who was born early and the important people surrounding them around the time of birth (Heydarpour et al., 2017; Veronez, Borghesan, Correa, & Higarashi, 2017). This study revealed that these experiences of giving birth early are a powerful incidence which is seen as traumatic to the mother. When a child is born prematurely, the focus shifts from the pregnant mother to the child who needs the care to survive. This involves highly specialised medical care which does not involve the mother. Furthermore, the mother's participation in the care of the child is in the background as she allows the medical professionals to save her infant's life (Spinelli et al., 2016). This affects the motherhood identity that the mother was preparing to embody. The impact on the motherhood identity affects various aspects of the mother's internal and external processes surrounding the birth.

The current study has succeeded in its aim of exploring the psycho-social experiences of giving birth prematurely in a low socio-economic context. The mothers who took part in the study had given birth in a public hospital within the North West Province. The majority of the participants were unemployed and were depending on family members or partners to financially support them. The psychological and social experiences suggested that mothers' experiences in low socio-economic contexts are similar to research participants in high socio-economic contexts regarding the early stages of post-partum. The mothers experienced shock, sadness and guilt, and they blamed themselves for the early birth.

The hospitals which were represented afforded the mothers an opportunity to perform KMC with their children when the infant became stable and was no longer on the various machines in the NICU. KMC is a cost-effective intervention to reduce infant mortality and morbidity (Feucht et al., 2016). In South Africa, it is implemented as part of the various

campaigns to support the decrease of mother and child mortality in Africa (Feucht et al., 2016). KMC was implemented in public institutions because of the growing number of neonatal shortages and rapid up-referrals of patients from lower level hospitals (Feucht et al., 2016). The mother spends time in the hospital with her infant to make space for other children who need to be admitted in the NICU. An advantage of KMC is that it improves the mother-and-child bond (Eun-sook et al., 2016). This specific step within the care of the prematurely born infant in the hospital is the one that allows the mothers to care for their child. It promotes emotional bonding between mother and child, improving maternal affection between mother and child (Eun-sook et al., 2016; Noren, Nyqvist, & Rubertsson, 2018). KMC also reduces maternal stress levels (Athanasopoulou & Fox, 2014; Noren et al., 2018).

Awareness is therefore raised about the experiences of the mothers immediately after giving birth prematurely, which is the time when the mothers are experiencing emotional turmoil. Gibson (2016) piloted a psycho-social intervention programme in private hospitals in the Gauteng Province which may be potentially adapted to a public hospital.

The mothers expressed that they regarded social relationships as important and having an impact on how they experienced giving birth prematurely. The family was seen as important, but the type of social support they felt that they needed more and sometimes lacked was especially the relationship with the father of the child (Ghosh, Wilhelm, Dunkel-Schetter, Lombardi, & Ritz, 2010).

Limitations

This research study was conducted with participants who gave birth in public hospitals where the circumstances and experiences of their premature birth in a hospital may be very different from those in a private hospital.

The research study was conducted with seven participants who gave birth at different stages of gestation. Some mothers gave birth to very premature infants (28 weeks gestation) and some gave birth to late premature infants (34 weeks gestation). It is possible that the outcome of the research may have been different had it been conducted with a homogenous group. The mothers who gave birth before 32 weeks gestation seemed to experience more emotional turmoil and their infants spent a substantial amount of time in the NICU as compared to mothers who gave birth afterward 32 weeks gestation.

Setswana was used as the main language of data collection. The transcription was done in Setswana and then sections of the interviews which were used in the report were translated into English. This process extended the analysis period.

There were challenges in the recruitment of participants as NICU Graduate Stars Programme is not equally involved with all the public hospitals at all times.

There were potential participants who were not comfortable with taking part in the research for various reasons and therefore declined participation. Only participants who consented were included.

Recommendations for Practice

Premature infants typically go through different stages in their admission in the hospital: admission in the neonatal intensive care unit (NICU), high care ward, and then the KMC unit. Mothers of these children experience different emotions based on the different stages that their children pass through. Mothers report a heightened emotionality when a child is in the NICU. It would, therefore, be recommended that the mothers of prematurely born children be referred to a psychologist or a counsellor for supportive psychotherapy intervention with the aim to contain their emergent emotions, explore the maternal identity and explore the ambivalence with regard to the infant. This will enable the mother to be contained and assisted to work through these emotions.

Mothers who are at risk of giving birth prematurely and are scheduled to give birth because of other medical conditions can also be psychologically prepared regarding what to expect after the child has been born, the most common feelings at this stage, the appearance of the newborn and the NICU setup.

Support groups could be initiated to allow the mothers to support each other, allowing the mothers to share personal experiences and feelings as well as adaptive coping strategies. This could assist mothers who feel that they do not receive support from the fathers of the children or from their families.

The results from this study in a low socio-economic setting are mostly comparable to the results as described in the literature for higher socio-economic settings. This should allow future researchers and clinicians to test and adapt current support programmes and ensure that it is contextualised for the low socio-economic setting.

Conclusion

Conducting a qualitative research study allowed the researcher to arrive at the essence of the experience of premature birth among these mothers. The qualitative research enabled the researcher to reach the aims of the research and to answer the research question as in-depth interviewing allowed the participants to freely express themselves regarding their experiences.

The current research highlighted certain aspects of the experience of mothers regarding giving birth prematurely. The heightened psychological emotions at the beginning of the birth experience and the transition to feel attached to the child was deliberated upon.

Further research could focus on the homogenous experiences of mothers according to the gestational stage they gave birth in. Supportive psychotherapy and group therapy can be instituted to allow mothers to deal with the emotions and general psychological and social experiences and expectations around the premature birth of their children. Furthermore,

psycho-social programmes could be initiated using the findings of this study as a basis for mothers in these contexts. Alternatively, since the results suggest similar themes to the literature, programmes which have been utilised in high socio-economic contexts may be adapted for use in low-socio-economic contexts.

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APPENDICES: Tables

Table 1: Thematic Analysis- Different level themes.

Main Themes	Sub-themes
Psychological Experiences	• Psychological turmoil- shock, sadness, blame & guilt • Disruption in the role of mother and the development of mother identity. • Ambivalent experiences towards the child: a process of different stages.
Social Experiences	• The importance of paternal support • Ambivalent experiences towards the extended family. • Support from medical and nursing staff. • A network of support from other mothers with infants born prematurely.