ORIGINAL RESEARCH ARTICLE

Experiences of postnatal mothers regarding the implementation of maternal and neonatal referral system guidelines in Mopani District in the Limpopo Province, South Africa

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Abstract

South Africa experiences challenges of maternal mortality, caused by pregnancy related conditions. Limpopo Province as one of the provinces in South Africa, is also affected. There are challenges facing obstetric emergency referrals, despite the availability of maternal/neonatal referral system guidelines. Therefore, this study explored the experiences of postnatal mothers aiming at facilitation of prompt referral of obstetric emergencies. Descriptive phenomenological research methods were used. The study was conducted in two selected sites, a maternity unit of a district hospital and a primary healthcare facility (fixed clinic), which is a feeder clinic to the district hospital in a selected sub-district of the Mopani district. Population were eleven (11) postnatal mothers. Purposive sampling was used. Data were collected using in- depth individual face —to- face interviews. Data was analysed using Colaizzi's seven procedural steps. Four essential meanings and their constituents were revealed: postnatal mothers' positive experiences, challenging experiences, consequences of challenges and post-natal mothers' recommendations. Health care facilities to be equipped with adequate, functional, safe, reliable, well equipped obstetrical equipment, material and human resources to facilitate prompt referral of obstetric emergencies. (*Afr J Reprod Health* 2025; 29 [2]: 17-26).

Keywords: experiences; implementation; maternal; neonatal; referral system; guidelines

Résumé

L'Afrique du Sud est confrontée à des problèmes de mortalité maternelle, causée par des conditions liées à la grossesse. La province du Limpopo, l'une des provinces d'Afrique du Sud, est également touchée. Les références aux urgences obstétricales rencontrent des difficultés, malgré la disponibilité de lignes directrices sur le système de référence maternelle/néonatale. Par conséquent, cette étude a exploré les expériences des mères postnatales dans le but de faciliter une orientation rapide vers les urgences obstétricales. Des méthodes de recherche phénoménologiques descriptives ont été utilisées. L'étude a été menée dans deux sites sélectionnés, une maternité d'un hôpital de district et un établissement de soins de santé primaires (clinique fixe), qui est une clinique de liaison avec l'hôpital de district dans un sous-district sélectionné du district de Mopani. La population était composée de onze (11) mères postnatales. Un échantillonnage raisonné a été utilisé. Les données ont été collectées au moyen d'entretiens individuels approfondis en face à face. Les données ont été analysées à l'aide des sept étapes procédurales de Colaizzi. Quatre significations essentielles et leurs constituants ont été révélés : les expériences positives des mères postnatales, les expériences difficiles, les conséquences des défis et les recommandations des mères postnatales. Les établissements de soins de santé doivent être dotés d'équipements obstétricaux, de ressources matérielles et humaines adéquats, fonctionnels, sûrs, fiables et bien équipés pour faciliter l'orientation rapide des urgences obstétricales. (*Afr J Reprod Health 2025*; 29 [2]: 17-26).

Mots-clés: expériences, mise en œuvre, maternel, néonatal, système de référence, lignes directrices

Introduction

Maternal and Neonatal health is an important global health priority. Moreover, there are effective interventions developed and implemented to decrease maternal mortality and achieve optimal maternal health¹. However, despite the interventions, throughout the world between 1990

and 2015 the ratio for maternal mortality rate (the number of maternal deaths per 100 000 live births) has decreased by only 2.3% per annum². Every day in 2020, almost 800 women died from preventable causes related to pregnancy and childbirth³. Out of recorded maternal deaths (99%) were from developing countries⁴. Out of 99%, more than 50% are from the sub-Saharan Africa, particularly in rural

areas⁵. Developing countries are low resourced and almost 75-90% maternal deaths occur, wherein almost 86% (254 000) is from African countries⁶. In South Africa during the COVID-19 pandemic, the infant mortality rate (iMMR) increased by 30% in 2020 and by 47% in 2021 compared to 2019. However, by 2022, the iMMR had returned to its pre-pandemic level⁴. On the other side, in the same year (2017) an estimated 2.5 million new-borns died within few weeks of life, approximately 7,000 babies per day in the first week of birth^{7,8}. Most neonatal deaths (99%) occurred in low-and middle-income countries9. In South Africa the deaths of under fiveyear-olds is approximately 33%⁴. Infant deaths (before one year) 44%, and 87% of neonatal deaths (in the first month) occur during the first seven days after birth⁴. Thus, poor maternal and neonatal health remains a significant problem in rural South Africa. Maternal, foetal and neonatal mortality rate in lowincome countries¹⁰ are higher compared to highincome countries because of unstable health systems such as unavailability of services, poor access and utilization of health services, poor referral system, lack of coordination between Primary Health Care (PHC) services and hospitals, lack of transport and roads, etc. Lack of coordination between primary health care services and hospitals might be a major barrier to prompt referral of patients to a higher level of care when necessary¹⁰. In India¹¹, most of maternity referral's challenges occurred because the staff failed to communicate with higher level of care and delays in response and transportation. Similarly, South Africa experience referral system challenges contributing to maternal and neonatal mortality rate¹².

More maternal mortalities occurred due to the delay in referral of clients from a lower level of care to a higher level 12. Delay in inter-facility transport was identified as the major problem during referral processes. It was found that the referral system contributed to 32.5% mortalities, in which between 55.2% and 79.9% of women died due to delays in referrals from Community Health Centres (CHCs), district hospitals and regional hospitals respectively 13. It was discovered that factors contributing to high mortality rate were among others: inappropriate antenatal care; delay in referral of patients; inadequate means of transport; long distance to the referral hospital; and lack of emergency obstetric care at referral points near the

patient's place of abode¹⁴. Over two-thirds (79 %) of deaths caused by haemorrhage were found in district hospitals where the contributory factor was related to long-distance travelled by patients between referrer-receiver facilities¹⁴. In many instances where patients received timeous and appropriate care at primary health care facilities before referral to higher centres, most maternal deaths were curbed¹⁴. Most neonatal and maternal deaths can easily be prevented by early detection of complications plus an appropriate emergency referral system¹⁵.

A well-functioning referral system is mostly regarded to be a necessary element of successful Safe Motherhood Programmes¹⁶.

The authors are of the opinion that if the experiences of postnatal mothers in Mopani district can be explored and described, maternal and neonatal referral system guidelines might be enhanced. Most importantly, this may reduce maternal and neonatal morbidity and mortality rate. Therefore, this study might be of significance in providing insights to improve the implementation of maternal and neonatal referral system guidelines among the primary health care facilities and the district hospitals in Limpopo province.

Methods

Study design

A descriptive phenomenological approach was used. The design was deemed appropriate as it allowed postnatal mothers to explore and describe their experiences regarding the implementation of maternal/neonatal referral system guidelines. By adopting this approach, the authors were mindful that the study was conducted in different levels of the healthcare service and groups with different perspectives.

Settings

The study was conducted in the Mopani district, which is one of the five districts constituting Limpopo province. According to the district perinatal review report, the selected sub-district in Mopani District experienced a high maternal mortality rate of 9/3079 (292,1) IMMR in 2016/2017, which is high compared to those of its

counterparts (Mopani District, Department of Health, Health Plan, 2019:3). Furthermore, for the period 2017/2018, the sub-district had a high maternal mortality of 7/4829 and a Neonatal Mortality Rate (NNMR/10000) of 10, 97. The study area were two sites, namely, a maternity unit of a district hospital and, a primary health care facility (fixed clinic) which is a feeder clinic to the district hospital. The district hospital serves a population of 218 030 with 67 067 households¹⁷. It caters for 128 villages, population age distribution: women of childbearing age, 15- 34: 3481¹⁷. The hospital has an average of 500 deliveries per month¹⁸.

Study participants

All mothers who were attending postnatal care at the selected primary health care facility and the selected district hospital in Mopani District, Limpopo Province were assessed for eligibility criteria.

The inclusion criteria: - post-natal mothers who were 18 years and older and who were referred or previously referred to the selected district hospital with a serious, life-threatening complication/obstetrical emergency.

Sampling method and sample size

The study population comprised of eleven postnatal mothers. The study adopted a purposive non-probability sampling method to select the eleven postnatal mothers, based on their experience, regarding the implementation of the maternal and neonatal referral system guidelines. The sample size of the study was determined by the number of participants who volunteered to take part. Moreover, in phenomenology studies a small number of study participants is required, more often than not, should be fewer than 10^{19} . The justification for the use of purposively sampling is that it enables the researcher to select participants who have insight and understanding about the phenomenon.

Data collection and analysis

Data were collected over 2 months 2 weeks' period from the 11th November 2021 until the 14th January 2022. The researcher conducted unstructured indepth face- to -face individual interviews. The participants were requested to share their experiences, regarding the implementation of

maternal and neonatal referral system guidelines. Probing questions were asked to enable participants to clarify issues that were unclear to the researcher. The following research question was asked: "What are your experiences regarding the referral process you went through during any stage of your pregnancy from one level of care to another?" various communication skills such as paraphrasing and listening were used. The interviews were conducted in either English, Sepedi and/or 'Khelobedu'. As 'Khelobedu' is a local dialect, therefore, the researcher had to be prepared to conduct the interviews in any of the three languages. As the researcher is conversant with all three languages, there was no need for an interpreter. Probes were used to enrich and elicit more responses regarding, the experiences they went through during any stage of their pregnancy when they were referred from one level of care to another. The interviews were audio-recorded as consented by the participants to maximise capturing of information. Participants were given code names to identify them for anonymity and confidentiality purpose. For example, for the district hospital participants: district hospital post-natal mothers (DH# PN/M1-8), For the primary healthcare facility participants: primary health care post-natal mothers (PHC# PN/M1-3), The researchers transcribed the interviews. The study used the seven Colaizzi's procedural steps method for data analysis.

This method comprised of integrated, contextualising strategies that entail interpreting the narrative data within the context of a "whole text" 19. The method was applied as follows: The researchers read all transcribed interviews to get a feeling for them, reviewed each transcribed interview and extracted significant statements, formulated meanings for each significant statement, organised formulated meanings into clusters of themes, integrated results into exhaustive description of the phenomenon, formulated exhaustive description into statement of identification of its fundamental structure and lastly, returned to participants for validation of findings¹⁹.

Measures to ensure trustworthiness

To ensure trustworthiness the researcher adhered to the principles of credibility, dependability, confirmability, transferability, authenticity and bracketing.

Results

The following four (4) essential meanings and fourteen (14) constituents reflecting the experiences of post-natal mothers emerged (see Table 1): Post-natal mothers' positive experiences, post-natal mothers' challenging experiences, consequences of challenges and post-natal mothers' recommendations (regarding the implementation of maternal and neonatal referral system)

Four essential meanings

1. Post-natal mother's positive experiences regarding the implementation of maternal and neonatal referral system

In this context, a *positive experience* for post-natal mothers refers to their overall satisfaction and wellbeing resulting from the care they receive from health professionals, such as primary health care nurses, emergency service personnel, and district hospital nurses. This includes feeling supported, receiving appropriate and timely care, clear communication, compassion, and having their physical and emotional needs met effectively during the postnatal period. These factors contribute to the mothers' sense of confidence, comfort, and positive recovery after childbirth

Findings indicated that post-natal mothers' experiences were perceived as positive and effective when practiced by primary health care nurses, emergency service personnel and district hospital nurses. Postnatal mother's positive experiences were supported by six constituents as stipulated in table 1 above.

Effective maternal healthcare and health education at PHC

Post-natal mothers expressed that they were well managed for psychological well-being, prevention of communicable diseases, including sexually transmitted infections, and health information regarding diet, exercises and preparation for delivery while at the primary health care level. From the interviews it was evident that there was a good interpersonal relationship between the participants and nurses in the primary healthcare setting as described by the participants in the following quotes:

"...Was like the best one... they talk to you; understand how you feel... talk to you about your past... to understand like everything... you are facing...they were able to help me... treated me very well, equally actually to other patients... like they treat us...like... family ... Yeah, so my journey...the best one..." (PHC# PN/M 3).

Effective referral from PHC to hospital

Referral from PHC to hospital was perceived by post-natal mothers as effective. This was seen in close monitoring, early identification of problems and prompt referral of mothers and their neonates from primary healthcare facilities to district hospitals as verbalised by the participants:

"...I travelled so well to arrive... at the hospital even though my situation was difficult... I was supposed to give birth to my baby on the 1st of December 2021 according to the doctor's opinion... so that didn't happen... that is why I was referred from the clinic to the hospital..." (DH# PN/M 1).

Effective referral for high-risk maternal management

Participants mentioned that they were referred from local clinic to high risk clinic at the district hospital. It is evident from the findings that participants were aware of risks related to their pregnancy as shared in the following sentiment:

"...I am feeling very well...I met with the nurses at this clinic ... they checked me, and told me that I am not allowed to continue with check-ups... at this clinic... it's then that they referred me to the hospital..." (PHC# PN/M 1).

Effective emergency medical services to hospital

Participants expressed positive feelings towards the journey they took by ambulance when they were referred from one level of care to another. It is evident from the results of the study that participants felt comfortable when they were transferred. The emergency medical service seemed to be responding positively when needed and adhering to COVID-19 regulations and protocols as observed in the following extracts:

Demographic profile of the participants

Category of the participant	Age group of participant	Number of participants	Gender	Parity (postnatal mothers)	Highest Educational level (HCW)
1.Post-natal mothers	19-24yrs	01	All females	1	1.1. Matric x 1
	25-29yrs	02		1-6	1.2. Matric x 2
	30-39yrs	05		2-4	1.3. Grade 9 - 11
	40-49yrs	03		2-8	1.4.Grade 5 - 8

Table 1: Essential meanings and constituents of post-natal mothers' experiences regarding the implementation of maternal and neonatal referral system

Essential Meanings	Constituents			
1.Post-natal mothers' positive	Effective maternal healthcare and health education at PHC Effective			
experiences regarding the	referral from PHC to hospital			
implementation of maternal and	Effective referral for high-risk maternal management Effective			
neonatal referral system	emergency medical services to hospital			
	Effective maternal healthcare and health education at hospital before and			
	during labour			
	Effective maternal and neonatal care and health education at hospital			
	after labour			
2.Post-natal mothers' challenging	Maternal and neonatal healthcare service provision challenges (PHC)			
experiences regarding the	Maternal and neonatal healthcare service provision challenges (hospital)			
implementation of maternal and	Maternal and neonatal healthcare resource related challenges			
neonatal referral system	Maternal challenges to access maternal and neonatal healthcare services			
3. Consequences of challenges with	Maternal and neonatal physical and emotional consequences			
the implementation of maternal and				
neonatal referral system				
4.Post-natal mothers'	Recommendations for PHC			
recommendations regarding the	Recommendations for hospital			
ē ē	Maternal recommendations			
neonatal referral system				

"...I came here per ambulance... My journey was so well, however, after I entered the ambulance, I started vomiting...but the person who was with me in the ambulance supplied me with a plastic bag so that I can vomit inside...all in all, my journey was so well until I got my baby..." (DH# PN/M 2).

Effective maternal healthcare and health education at hospital before and during labour

It is evident from the study that participants were empowered to participate actively and involved in decision making during their care while at the district hospital. They were informed about the nursing care they were receiving including the actions to be taken when the need arose:

"...When I arrived at the tertiary hospital...they checked me... told me that the baby is not growing well... they told me that they are planning to take me

to an operation (referring to caesarean section) ..." (DH# PN/M 6).

Effective maternal and neonatal care and health education at hospital after labour

Participants mentioned that they participated in their nursing care as well as in health promotion activities. The postnatal mothers seemed to have gained knowledge regarding maternal and neonatal care including health information regarding Covid-19 regulations/protocols as evident in the following quotes:

"...the nurses taught us how to wash, sanitise our hands and take care of our babies, all of us whose babies are cared inside the bottles (referring to the incubators) ..., we are allowed in nursery room every two hours wearing our masks to change our baby's nappy ... and ... taught how to feed our babies through the tube (referring to the nasogastric feeding tube)." (DH# PN/M 7).

2. Post-natal mothers' challenging experiences regarding the implementation of maternal and neonatal referral system

These challenging experiences form an essential part of post-natal care, shaping how mothers perceive and engage with healthcare services. Recognizing these challenges enables healthcare providers to tailor care that is more empathetic, efficient, and responsive to the needs of mothers. Furthermore, the specific challenges faced by post-natal mothers are supported by four key constituents, which further highlight the complexity of their care experiences and the need for improved support across all levels of healthcare. Post-natal mothers expressed challenging experiences as an important essence during their care at the primary health care level, during referral as well as when they were at the referral site. Those challenges were supported by four constituents as indicated in table 1 above.

Maternal and neonatal healthcare service provision challenges at PHC

Post-natal mothers mentioned that they were faced with the challenges of taking a long time before they could be attended to while at the clinic. They also expressed feelings of fear due to non-adherence to Covid 19 regulations by some of the patients while at the primary healthcare facility. Participants expressed their feelings as follows:

"... based on the fact that when you visit the clinic, even if you can go early... you will go back home very late... "(DH#PN/M 1)

"Hmhm... with Covid it was very much difficult because some of the patients are not wearing masks and...we are afraid to tell them to wear a mask..." "(DH#PN/M 1)

Maternal and neonatal healthcare service provision challenges at the hospital

Post-natal mothers expressed feelings of disappointment, dissatisfaction and fear. They were also not happy about the way the nurses were communicating with them as well as the way medical and surgical procedures were carried out during their care. All in all, participants viewed the whole situation as a negative attitude displayed by healthcare professionals. This was captured from the following quotes:

"...I was informed about the operation, but they did not tell me about the procedure. Everything happened so quickly that I just find myself being wheeled to the theatre swiftly so... I was very scared... To make matters worse, they operate on you while you are watching..." (DH# PN/M 6).

"...The other thing I observed is that most of the nurses cannot communicate well with the patients..." (PHC# PN/M 2).

Maternal and neonatal healthcare resource related challenges

Material and human resources are some of the essential aspects for the implementation of maternal and neonatal referral system guidelines. However, the current research revealed challenges in relation to human and material resources as indicated in the following quotes:

"...At the clinic there is a shortage of many things, for example, nurses, doctors, linen medication, sonar... and the books for pregnant women (referring to maternity care case record booklets) ..." (DH# PN/M -2); (DH# PN/M -2).

Maternal challenges to accessing maternal and neonatal healthcare services

When describing their experiences regarding the implementation of maternal and neonatal referral system guidelines, participants described transport challenge as a contributory factor to inadequate access to maternal and neonatal health care services.

The following quotes are indicative of their description:

"...When the pains became worse... I prepared myself to come here to the hospital... I phoned the ambulance and they told me that I must wait for them on the roadside near where I am staying. I experienced so much pain while I was waiting for the ambulance near the main road..." DH# PN/M -3);

3. Consequences of challenges with the implementation of maternal and neonatal referral system

In the context of postnatal care, the "consequences of challenges" refer to the physical and emotional impacts experienced by both the mother and newborn as a result of difficulties encountered during the postnatal period. These challenges might include inadequate medical care, lack of emotional support, fatigue, and physical recovery from childbirth.

For mothers, consequences may manifest as physical health issues (e.g., postpartum complications, pain) and emotional struggles (e.g., postpartum depression, anxiety). For newborns, consequences could include health complications, feeding difficulties, or developmental concerns, alongside emotional impacts influenced by the mother's wellbeing. Essentially, the challenges in care result in a combination of physical and emotional outcomes for both mother and baby

Post-natal mothers expressed challenges they experienced during their care, as having maternal and neonatal physical and emotional consequences. This was supported by maternal and neonatal physical and emotional consequences constituent succeeding.

Maternal and neonatal physical and emotional consequences

Maternal and neonatal physical and emotional consequences were expressed by post-natal mothers as indicated in the following excerpts:

"...I felt like I wanted to pass the stools and there was no toilet nearby... I was feeling very hot... I could not hold it any longer. I told my neighbour not to panic and also not to assist me. I disclosed to her that I am on ARV treatment... As such I asked her to stay away... I went a bit away from the roadside, placed the (puma) blanket I was wearing on the ground, I squatted and pushed, and that is when I gave birth to my baby girl near the road..." (DH#PN/M -3);

4. Post-natal mothers' recommendations regarding the implementation of maternal and neonatal referral system

These recommendations for postnatal mothers were derived from data analysis based on the three constituents as indicated in table 1 above, which focused on three key components (constituents) that capture the holistic needs of postnatal mothers. These constituents provide a framework to address the physical recovery, emotional well-being, social support and postpartum care practices that are vital during the post-natal period. The following recommendations aim to guide mothers, healthcare providers, and support networks in ensuring a healthy and balanced postpartum experience.

Recommendations for PHC

Post-natal mothers expressed their feelings of a need for some improvements to be done in primary healthcare settings based on the consequences of the challenges they experienced while they were provided with healthcare services at primary healthcare services. Participants expressed their needs as supported by the following quotes:

- "...Like, if they are opening at 07H00 at the gate, they should start working at 07H00... (DH# PN/M -1);
- "...Mhmhm..., my suggestion was that pregnant mothers should not be combined with other patients. I think they should put their priority on the old and pregnant people..." (DH# PN/M -1);

Recommendations for hospital

Likewise, post-natal mothers' feeling of improvement was not only primary health care centred, but was extended to referral hospital facilities where a high level of care is expected. This was expressed by the participants in their comments:

"...They were supposed to inform me that "we are going to operate on you and this is what is going to happen"..., including the fact that they were going to operate on me while I will be watching... in that way I was going to be prepared..." (DH# PN/M -6);

Maternal recommendations

Recommendations for maternal care were conveyed by post-natal mothers, based on aspects related to the prevention of communicable and non-communicable diseases, compliance with treatment/orders, the importance of antenatal care service and prompt referral. The following quotes support this sentiment:

- "...My input is that all mothers who tested positive for HIV should take care of their medication..."
- "...I would like to say to the pregnant mothers out there that they should relax and not panic because once you panic your blood pressure rises..."(DH# PN/M -3);

Discussion

Based on the findings as stated, it is indicative that the effects of mental health problems either encountered during pregnancy, childbirth or postnatal period, highlight the need to promote positive maternal health care outcomes during the implementation of maternal and neonatal referral system guidelines at primary healthcare facilities and referral hospitals. On the other hand, the information gathered from this study is indicative that participants experienced cheerful and grateful moments when receiving care throughout their pregnancy journey. Their pregnancy journey, in this context, refers to the time they were cared for and referred from the primary healthcare facilities to the district and/or regional and/or tertiary hospital either for high-risk clinic and/or during labour, including post-natal care.

The care and the referral journey was considered by the participants as dignified. Women who were respected, treated with equity and offered emotional support have better post-partum psychological outcomes²⁰. According to this study mothers' findings, post-natal essence implementation of the maternal and neonatal referral system was considered to be positive and effective as evident from the six constituents as indicated above. The findings of this study indicated that postnatal mothers were given health education during their antenatal care period at the primary health care level regarding pregnancy related issues. Post-natal mothers were grateful about the fact that they were not just physically cared for during pregnancy, but they were also catered for their psychological wellbeing through health information, early diagnosis, and treatment for communicable and noncommunicable medical conditions, including prompt referral to the next level of care. Post-natal mothers were also cheerful about the relationship they had with the staff members who were caring for them. They considered the relationship to be amicable. Similar findings from other studies²¹ revealed that women who utilised primary healthcare facilities for antenatal care during their recent pregnancy and received health information, managed effectively for communicable and non-communicable diseases, were less likely to experience pregnancy-related complications.

Women who have received health information and properly engaged on issues related to maternal health care, are likely to experience effective maternal health care service²². This implies that effective maternal health care service through health education, either using formal or informal means, has an impetus to improve women's knowledge on the prevention of complications related to pregnancy and childbirth²². Based on the findings of this study, it is indicative that attending to the mother's physical, psychological and social wellbeing during the provision of healthcare and health education through physical engagement, and listening attentively, plays a major role in reducing maternal and neonatal complications. Again, mothers who are well informed through adequate health information, respect and dignity will be cooperative and be less stressed. As a result, positive maternal outcome will be enhanced. Moreover, effective maternal healthcare services and health education, especially at primary health care level have been reported²³ to improve maternal health, thus reducing maternal morbidity and mortality. The findings from this study and literature, corroborate the need to strengthen maternal healthcare services and health education, especially at primary health care level. This will assist in improving maternal health care outcomes from an entry level of the health care system to reduce maternal and neonatal morbidity and mortality rate.

Conclusion

The findings of this study emphasize the critical role of comprehensive maternal healthcare services and effective implementation of the maternal and neonatal referral system guidelines in improving maternal and neonatal health outcomes. The study highlights that addressing both the physical and psychological needs of post-natal mothers, alongside the provision of health education and emotional support, leads to positive maternal health experiences. Participants expressed gratitude and satisfaction with the dignified care they received during their pregnancy journey, from primary healthcare facilities to referral hospitals, which

contributed to improved postpartum psychological outcomes. Therefore, strengthening maternal healthcare services and health education at the foundational level of the healthcare system is crucial to ensuring positive maternal health outcomes and safeguarding the wellbeing of mothers and newborns. This study underscores the importance of dignified care, respect, and emotional support in promoting overall maternal health and reducing maternal and neonatal complications.

Ethics approval and informed consent

Institutional review board statement: The authors declare that this study obtained ethical approval from the University of Pretoria Faculty of Health Sciences Research Ethics Committee (Ethics Reference No: 236/2021). Permission to conduct the study was obtained from the Limpopo Provincial Department of Health and the Mopani District Health Department: K.R.M, M.M.R and M.D.P.

Informed consent statement: Informed consent was obtained from all participants before data collection. Copies of signed consent forms are available: All authors are prepared to provide them to the journal on request: K.R.M, M.M.R and M.D.P.

Consent for publication

All authors have read and agreed to the published version of the manuscript: K.R.M, M.M.R and M.D.P.

Data availability

The data supporting the findings of this study such as recordings are available. All authors are prepared to provide them to the journal on request: K.R.M, M.M.R and M.D.P.

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Competing interests

The authors declare that they have no competing interests regarding the publication of this paper: K.R.M, M.M.R and M.D.P.

Authors' contributions

Conceptualisation: K.R.M.

Methodology: K.R.M, M.M.R and M.D.P.

Formal Analysis & Interpretation of Data: K.R.M,

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Investigation: K.R.M, M.M.R and M.D.P.

Writing-Original draft: K.R.M, M.M.R and M.D.P. Writing, review and editing: K.R.M, M.M.R and

I.D.P.

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