

## ORIGINAL RESEARCH ARTICLE

# Organizational related challenges in antenatal care service delivery in semi-urban healthcare facilities in Gauteng, South Africa

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*Livhuwani Tshivhase<sup>1\*</sup>, Dzivhuluwani Mukwevho<sup>2</sup>, Idah Moyo<sup>3</sup> and Sophy M. Moloko<sup>4</sup>*

Department of Nursing Sciences: Sefako Makgatho Health Sciences University Pretoria 0001, RSA<sup>1</sup>; Department of Nursing Sciences: Sefako Makgatho Health Sciences University Pretoria 0001, RSA<sup>2</sup>; Population Solutions for Health Harare, Zimbabwe. Research Fellow for the Department of Health Studies, University of South Africa, Pretoria, RSA<sup>3</sup>. Department of Nursing Sciences: Sefako Makgatho Health Sciences University, Pretoria 0001<sup>4</sup>

\*For Correspondence: Email: [livhuwani.tshivhase@smu.ac.za](mailto:livhuwani.tshivhase@smu.ac.za); Phone: 012 5213329 /0820627968

## Abstract

Antenatal care is vital in improving pregnancy outcomes. It is a vehicle for assisting in the reduction of maternal mortality. For this to be realized, there is a need for antenatal care that is effective, acceptable, and accessible to the users. However, South Africa is faced with challenges that impact the utilization of the service. A descriptive phenomenological design was used to explore the challenges of pregnant women attending antenatal care at selected facilities in Gauteng Province. Data were collected from 14 purposefully selected participants through in-depth individual telephonic interviews. Data analysis was guided by the Colaizzi steps. Credibility, dependability, confirmability, and transferability measures were applied to ensure trustworthiness. Ethical principles were adhered to throughout the study. Three themes emerged: resources and Covid-19-related challenges, overwhelming logistical processes, and suggested recommendations for ANC improvement. Management should provide sufficient resources and counselling services for staff and prioritize antenatal care services. (*Afr J Reprod Health* 2022; 26[10]: 44-54).

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**Keywords:** Organizational challenges; antenatal care; experiences; pregnant woman

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## Résumé

Les soins prénatals sont essentiels pour améliorer l'issue de la grossesse. C'est un vecteur d'aide à la réduction de la mortalité maternelle. Pour cela, il faut des soins prénatals efficaces, acceptables et accessibles aux usagers. Cependant, l'Afrique du Sud est confrontée à des défis qui ont un impact sur l'utilisation du service. Une conception phénoménologique descriptive a été utilisée pour explorer les défis des femmes enceintes qui fréquentent les soins prénatals dans des établissements sélectionnés de la province de Gauteng. Les données ont été recueillies auprès de 14 participants sélectionnés à dessein par le biais d'entretiens téléphoniques individuels approfondis. L'analyse des données a été guidée par les étapes de Colaizzi. Des mesures de crédibilité, de fiabilité, de confirmabilité et de transférabilité ont été appliquées pour garantir la fiabilité. Les principes éthiques ont été respectés tout au long de l'étude. Trois thèmes ont émergé : les ressources et les défis liés au Covid-19, les processus logistiques accablants et les recommandations suggérées pour l'amélioration des soins prénatals. La direction doit fournir des ressources et des services de conseil suffisants au personnel et donner la priorité aux services de soins prénatals. (*Afr J Reprod Health* 2022; 26[10]: 44-54).

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**Mots-clés:** Défis organisationnels; soin prénatal; expériences; femme enceinte

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## Introduction

Antenatal care (ANC) is the provision of comprehensive health care to pregnant women by skilled health care professionals in a well-functioning health care facility<sup>1</sup>. According to Ekabua<sup>2</sup>, it is the health care provided to pregnant women throughout pregnancy until child's birth. It aims to identify the existing problems and/or problems that can develop during pregnancy and

affect maternal and child health outcomes. ANC begins immediately when a positive pregnancy is confirmed. Ngxongo<sup>3</sup> advocates for antenatal care as the cornerstone to reducing maternal death and improving maternal health care. Related to this, a scoping review<sup>4</sup> outlines the three dimensions of quality ANC: 1) health systems, 2) content of care, and 3) women's experiences of care and their direct influence on antenatal outcomes and experiences at the individual and facility levels.

Evidence has shown that quality care during pregnancy and delivery is linked to improved maternal and child health outcomes<sup>5,6</sup>. Also, institutional deliveries play a crucial role in reducing maternal mortalities<sup>1</sup>. Studies in India have demonstrated that socio-economic inequities still affect access to institutional delivery services<sup>7,8</sup>. Downe<sup>9</sup> indicates that health system factors, such as service delivery models, community engagement and the availability of human and material resources, have a bearing on the quality of antenatal care services. Evidence has demonstrated that mothers who received ANC services and delivery-related health education were more likely to have institutional deliveries than those who did not receive any<sup>10,11</sup>. Some study findings suggest that ANC has the potential to influence women's decisions to return to the facility for maternal and child health services; therefore, an antenatal-friendly setting becomes critical<sup>12</sup>.

The attitude of maternity professionals was found to be the crucial organizational factor determining whether a mother's vulnerability will be increased or decreased<sup>13,14</sup>. In instances where mothers received warmth, kindness, and respect, their self-esteem grew. They flourished and were keen to attend antenatal care as scheduled<sup>14</sup>. There are positive examples from such study findings as those of McLeish and Redshaw<sup>15</sup>, who indicated that mothers were made to feel welcome and safe in antenatal care settings, which facilitated making informed choices by clients. In contrast, the study in South Africa found that the unavailability of human and material resources negatively influenced access to antenatal care services by pregnant women<sup>3</sup>. The other related study findings revealed that pregnant women had limited access to health care and emergency service. The access to health care and emergency services was influenced by the unfriendly clinic operation times and days, the number of clients served per clinic session, the package of services provided per clinic session, and the unavailability of transport<sup>9</sup>. Similarly, Sibiyi<sup>16</sup> cited the shortage of nurses working in healthcare facilities and the unavailability of treatment as factors contributing to reduced access to antenatal care services.

Our study comes in the context of the Covid-19 pandemic, which heightened the already existing challenges due to fragile healthcare

systems. This study adds to this body of knowledge, focusing on the organizational factors that affect the provision of antenatal care services. Therefore, it is critical that factors affecting antenatal care service delivery and the resultant maternal and child health outcomes are explored and documented to enable policymakers, healthcare planners, and other health stakeholders develop innovative strategies to enhance the quality of maternal and child health care services<sup>11</sup>.

## Methods

The study adopted a descriptive phenomenological approach to explore and describe the lived experiences of pregnant women attending antenatal care in selected Gauteng clinics. Descriptive phenomenology was chosen as it best explores the complex world of lived experiences from those who lived it<sup>17,18</sup>. This qualitative approach enabled the researchers to explore the information provided by participants, giving insights into how they experienced the phenomena under study.

### Setting

In keeping with the World Health Organization and the National Department of Health maternity guidelines, South Africa provides free primary health care services, including antenatal care since 1994. This is financed through the public fiscus<sup>1,19</sup>. The city of Johannesburg has 15 primary health care facilities. In South Africa, primary health care is the entry level to the health care system. They operate from Monday to Saturday. Each facility is staffed with six to eight professional nurses, and one to two of those are usually allocated for ANC. The study was conducted in two primary health care facilities in Soweto Township. Soweto is the largest township in South Africa, situated in the City of Johannesburg, Region D, Gauteng Province, South Africa. All the primary health care facilities render comprehensive primary health care such as acute and chronic patient care, antenatal care, immunizations, and reproductive and youth-friendly services. One of the two facilities was purposively selected due to the high monthly headcount of above 400 pregnant women, as reflected in the district health information system. The second facility was selected for convenience because it was easy to be accessed by the researcher.

## **Population**

The target population was pregnant women who accessed ANC services from the two selected facilities. The accessible population is the portion of a target population to which the researcher has reasonable access<sup>20</sup>.

## **Sampling**

Purposive sampling involves selecting participants that will mostly benefit the study<sup>20</sup>. Pregnant women attending ANC at the selected health care facilities were purposefully selected and were given information about the study. Those willing to take part in the study gave their written consent. Pregnant women aged 18 years and older, proficient in isiZulu or English, and attended ANC for more than two visits in the same facility either during the current or previous pregnancy were included in the study. The study excluded those who had less than two visits of ANC in the same facility and those who could not speak and understand isiZulu or English.

## **Data collection**

Data were collected from December 2020 to March 2021. The data collection commenced after ethical approval of the study was received from the University Ethics committee and permission was received from the facility managers. Prior to the interview, the researcher visited the selected facilities and recruited the participants who were coming for ANC services. Rapport was created with potential study participants. Information about the study was shared, and consent forms were distributed to those who voluntarily agreed to participate. Due to Covid-19 restrictive measures, appointments for telephonic interviews were set with the participants who voluntarily consented to participate. After this, in-depth audio interviews were conducted within a time frame of a week. Each participant was asked: "What *have been your experiences in attending antenatal care in this facility?*" Probes and prompts followed to facilitate further exploration of what participants said. All interviews took at least 30 to 60 minutes. The recorded interviews were transcribed verbatim within 48 hours of data collection. A total of 14 participants determined by data saturation (a point at which there was a redundancy of information) were interviewed.

## **Data analysis**

Data collection and analysis were conducted simultaneously. The researchers followed Colaizzi's steps of phenomenological data analysis as outlined by Shosha<sup>21</sup>. Each interview was analyzed before the following interview to gain insight into each participant's lived experiences about the phenomenon of the study. The researchers read each transcript repeatedly to get a sense of the collected data. In the second step, the researchers examined documents for rich data and extracted significant statements and phrases about the experiences of pregnant women attending ANC in selected facilities in Gauteng Province. Documents were checked for clarity of thought, and suggestions were incorporated to reach a consensus among the researchers<sup>22</sup>. Step three followed, wherein the researchers formulated and discussed the significant statements and meanings. An experienced researcher was invited to check all the statements and their meanings and established that the process was flawless and the meanings were consistent<sup>23</sup>. This was followed by step four, where the formulated meanings were arranged into clusters of themes, which were then shrunk into emergent themes<sup>21</sup>. In step five, all emergent themes were defined into a detailed description by combining all the theme clusters, emergent themes and formulated meanings to create an overall structure. The experienced researcher reviewed the findings for richness and completeness to provide a sufficient description and confirm that the detailed description reflected the experiences of pregnant women attending ANC in selected facilities in Gauteng Province<sup>24</sup>. Step six involved reviewing the detailed description to identify key elements that were then transposed into a definition of the participants' descriptions of their experiences during antenatal care attendance. The final step was validating the detailed description of participants' experiences with each participant by using a "member checking" technique. The second author achieved this by telephonically discussing the research findings with five participants, as was agreed initially during data collection<sup>21</sup>.

## **Measures to ensure trustworthiness**

In ensuring the study's trustworthiness, credibility, confirmability, transferability, and dependability were adhered to, as outlined by Korstjens and

Moser<sup>25</sup>. Credibility was ensured through member checking wherein the researcher, after analyzing the data, phoned five research participants to verify whether the themes developed were true reflections of the participants' experiences. Confirmability and dependability were ensured by describing each research step, keeping records of each step, and keeping an audit trail. Transferability was ensured by the thick description of the experiences and the context of the research study.

## Results

### *Sociodemographic characteristics of the participants*

Biographic data describe the participant's characteristics that might influence the study results.

Data were collected from 14 pregnant women, of whom eight were attending ANC at facility A and six were at Facility B. Their ages ranged between 24 and 39 years old, with gestational ages ranging from 20 weeks to 38 weeks. The mean age for the participants was 30, as well as the median. The mean for their gestational age was 29, and the median was 30. Most of them had more than one pregnancy, and only two were pregnant for the first time. All women, except one, visited the facilities twice or more for ANC in the current pregnancy. See Table 1. Three themes and nine sub-themes emerged from the findings, as shown in Table 2.

### *Theme 1: Challenges related to resources and the Covid-19 pandemic*

The study findings revealed that most participants viewed staff shortage and material resources and the Covid 19 pandemic as challenges affecting the ANC service they receive at the clinics.

#### *Subtheme 1.1: Shortage of staff*

The majority of participants indicated that the facilities do not have sufficient staff to offer the ANC to the number of pregnant women visiting the facilities daily. The situation was said to be worse in case of an emergency. The following statements support that:

*"What I have noticed is that there is one sister who checks our blood pressure; after that, we*

*wait for the same sister to examine us. Sometimes we stayed something like more than one hour without being attended." (Participant no. 3, 34 years).*

*"In the past week, there was this woman who was about to give birth, they said it is an emergency. It was worse. The nurse had to leave us and go to assist. We spent more than an hour waiting" (Participant no 10, 39 years)*

#### *Subtheme 1.2: Hostile attitudes of staff*

Participants expressed unsatisfactory treatment provided by health care providers and other support staff. They indicated that the staff members were ill-treating them and viewed their attitude as unfriendly, hostile, and seemed stressed.

*"Sometimes the reception lady is in a bad mood. Other staff members do not talk to us nicely, and they undermine us; the way they answer us when we ask them questions is through a hostile attitude. Maybe they are tired and stressed by workload, hmm". (Participant no.2, 29 years)*

*"They have a tendency of shouting. The approach they use is more of shouting at us even when we did nothing wrong". (Participant no 13, 30 years).*

#### *Subtheme 1.3: Insufficient supply of medicine*

Most of the participants expressed dissatisfaction with their care at the facilities. They mentioned inconsistency with the supply of medicinal supplements for pregnant women in facilities A and B, which resulted in some being sent to buy.

*"The only thing which is quite bothering is the fact that there is no medication. Other women cannot afford that R20.00, R15.00 to go and buy the required medication". (Participant no.8, 30 years).*

*"I feel we are not well cared for as they give us treatment today, and tomorrow there is none, and you need to buy yourself. What if I really need those medications because I have cramps and am pregnant? (Participant no.11, 32 years).*

**Table 1:** Biographic data of participants

Participant Number	Age(years)	Parity: Gravida	Gestational age	Clinic visit	Facility A/B
P001	26	P0G1	26 Weeks	3 <sup>rd</sup>	Facility A
P002	29	P1G2	30 Weeks	3 <sup>rd</sup>	Facility A
P003	34	P4G5	30 Weeks	5 <sup>th</sup>	Facility A
P004	30	P1G2	26 Weeks	3 <sup>rd</sup>	Facility A
P005	37	P1G2	38 Weeks	5 <sup>th</sup>	Facility A
P006	24	P4G5	34 Weeks	4 <sup>th</sup>	Facility A
P007	24	P0G1	20 Weeks	2 <sup>nd</sup>	Facility A
P008	30	P1G3	20 Weeks	1 <sup>st</sup>	Facility A
P009	21	P0G2	38 Weeks	7 <sup>th</sup>	Facility B
P010	39	P0G3	38 Weeks	6 <sup>th</sup>	Facility B
P011	32	P1G2	30 Weeks	3 <sup>rd</sup>	Facility B
P012	30	P1G2	26 Weeks	4 <sup>th</sup>	Facility B
P013	29	P1G2	20 Weeks	2 <sup>nd</sup>	Facility B
P014	30	P1G2	30 Weeks	2 <sup>nd</sup>	Facility B

**Table 2:** Themes and subtheme

Themes	Subthemes
<b>1. Challenges related to resources and the Covid-19 pandemic</b>	1.1 Shortage of staff 1.2 Hostile attitudes of staff 1.3 Insufficient supply of medicine 1.4 Unpleasant and unfavourable environment for clients.
<b>2 Overwhelming logistical processes</b>	.2.1 Challenges with the administrative procedures 2.2 Long waiting periods 2.3 Treatment approach to pregnant women care not prioritized
<b>3 Suggested recommendations to improve antenatal care</b>	3.1 Improve staffing 3.2 Restructure administration processes 3.3 Prioritize pregnant women

#### ***Subtheme 1.4: Unpleasant and unfavourable environment for the client***

Participants indicated that they were exposed to unpleasant and unfavourable environmental conditions while waiting outside the facility for ANC services- a situation warranted by Covid-19 pandemic restrictions. Participants had this to say:

*“Another thing is about Covid-19, the social distance that forced us to stand outside the clinic without even a shade. When it is raining, we get wet, and when it is hot, we get burnt by the sun”. (Participant no.2, 29 years).*

*"The first time when I went to the clinic, it was very cold, and then you had to wait outside because there is a certain number that is allowed inside the clinic due to Covid. 19 social distancing and stuff” (Participant no.3, 34 years).*

#### ***Theme 2: Overwhelming logistical processes***

The study findings revealed that participants were overwhelmed by how the facilities managed their

logistical processes. There were challenges with the administration, long waiting periods, and their treatment was not prioritized.

#### ***Subtheme 2.1: Challenges with the administrative procedures***

Participants stated that administrative procedures in the health care facilities were challenging and overwhelming, especially the retrieval of clinic cards and the filing system, making it difficult to retrieve old cards. Participants verbalized the following:

*"When you get to the reception area, they take their time to retrieve old until there is a build-up of 2 to 4 clients before they take your card to the room for service". (Participant no.9, 21 years)*

*“The only challenge that the clinic is facing is the filling at the administration area, the lost file, creating and opening of a new file which really consumes a lot of time”. (Participant no.13, 29 years).*

### **Subtheme 2.2: Long waiting periods**

The majority of participants expressed their experience of ANC service as discouraging and poor due to the amount of time spent in the health care facilities waiting for service.

*"Mhmm, the delay is with the filling system. So, reception and files, they need to fix that". (Participant no. 14, 30 years)*

*"It took longer because one nurse was doing most of the procedures, such as urine testing and BP for all other people, not only pregnant ones before they sent us to designated rooms. So, we waited in that queue, and at around 10:30, she took a break and she returned at around 11 while we were still waiting there. She checked the newborn babies and pregnant women at around 12 o'clock; then she took a lunch break, she came back from lunch, and then ahmm (clearing her throat) "excuse me". (Participant no. 5, 37 years).*

### **Subtheme 2.3: Treatment approach: pregnant women not prioritized**

The majority of participants expressed different views regarding the ANC program. They indicated that they should be prioritized and fast-tracked or given first preference as antenatal women. They had this to say:

*"So the first time I came to the clinic to book, hmm I was here at 8 am, I only reached reception at 10 am, and due to the tea time they would not help me (Participant no.8, 30 years)*

*"The experience I received, I could say, did not accommodate a pregnant woman because they just treat you as one of those. They do not even separate us into categories of, for example, pregnant women and those with chronic conditions, or anything like that." (Participant no.11, 30 years)*

### **Theme3: Suggested recommendations to improve ANC**

Participants suggested improving ANC, emphasizing staffing, restructuring administration, and prioritization of pregnant women.

### **Subtheme 3.1: Improve staffing**

The majority of participants suggested recruiting more staff to have sufficient administrative staff and dedicated health care providers for vital signs in different service areas, like chronic, general, and ANC.

*"I think there should be more people taking out files so that we do not sit long". (Participant no.1, 26 years)*

*"They are short-staffed. I would advise the clinic to get three nurses who will assist in checking BP, one for pregnant women, one for the chronic, and one for general patients". (Participant no.4, 30 years)*

### **Subtheme 3.2: Prioritize pregnant women**

Participants recommended that pregnant women have their queues and be attended to separately. They emphasized that they should be given preference to receive a quick service like the elderly because they get tired of standing for a long period.

*I am not saying others are unimportant, but pregnant women are already tired. We should have our queue. I think they could organize some chairs and shelter outside so that we do not stand for long. Our files should be kept separately from other files so that it is easy to find them and save time instead of spending the whole day". (Participant no.12, 30 years)*

*"We get tired quickly from the standing and the walking around. If they can limit the waiting for us, it would be much better. I feel like they should treat us like elderly people, you know". (Participant no.14, 30 years).*

### **Subtheme 3.3: Restructure administration processes**

Participants recommended that the facilities develop new filling and data management strategies wherein the client's file may be easily accessible and retrieved.

*"They just have to speed up the processes. Creating the card and marking it are the only things that took long. Other than that, the*

service was quick". (*Participant no.8, 30 years*).

"Mhmm, the delay is with the filling system; that is where the delay is. So, reception and files, they need to fix that". (*Participant no.14, 30 years*).

## Discussion

The purpose of the study was to explore organizational challenges affecting the antenatal care experiences of pregnant women at the selected facilities in Gauteng Province, South Africa. The study findings revealed that pregnant women experienced challenges related to resources, the Covid-19 pandemic infection control measures, and the logistical processes at the facilities. There were resource challenges such as inadequate staff at the facilities, the staff's hostile attitude, and the shortage of medicinal supplies. The number of nurses and administrative staff was insufficient to offer quality ANC services to pregnant women, as experienced by the participants. This is consistent with other study findings where health care facilities in Mpumalanga and Kwazulu Natal (KZN) were reported to have insufficient human resources, resulting in poor service delivery<sup>16,26</sup>.

As in this study, pregnant women in a study in Lao expressed a poor experience of ANC services due to insufficient staff to perform all duties necessary for their care<sup>27</sup>. In our current study, participants reported that they experienced harsh, unfriendly, and hostile attitudes of healthcare workers as they accessed the ANC services. Similar studies conducted in Tanzania and South Africa also found that nurses were unnecessarily harsh and impolite when talking to pregnant women<sup>28,29</sup>. Likewise, Malakian *et al*<sup>30</sup> reported that the public health system in South Africa is faced with negative staff attitudes, long waiting times, medicine stock-outs and staff shortages. The hostile attitude of staff members might be a reflection of the lack of incentives and the poor working conditions<sup>28</sup>.

In addition to staff shortages, this study found a shortage of medicinal supplements for pregnant women. Women were expected to purchase medicine, which was difficult for others because they could not afford it. According to the National Department of Health maternity guideline<sup>19</sup>, pregnant women are to receive free supplements from the healthcare facilities that offer

ANC service. Similar findings emerged from a study conducted in Tanzania, where women experienced an inadequate supply of medicine, and the health providers advised them to buy the medicines from the pharmacies<sup>28</sup>. Insufficient medicine supply is viewed as a burden to pregnant women's pockets and as one of the factors leading to maternal complications and mortality<sup>16,27,30,31</sup>. In the context of South Africa, ANC services, as recommended in the maternity guidelines, are among those free health services, and pregnancy-related medicines are freely recommended<sup>19</sup>. Contrary to this recommendation, medicinal shortages are commonly reported in South Africa<sup>16,30,31</sup>. This is contrary to the World Health Organisation's (WHO) recommendations that patients access healthcare without incurring financial losses. According to WHO<sup>1</sup>, every woman attending ANC must receive all nutritional supplements during pregnancy to achieve a positive outcome. Nutritional supplements tablets play a significant role in the well-being of the mother and unborn baby<sup>1</sup>.

The current study discovered that pregnant women were unhappy with the unfavourable exposure to environmental hazards whilst queuing for ANC services at the selected facilities. They viewed the practice of waiting outside as not favourable to them, especially in cold, rainy, and hot weather conditions. The facilities allowed a few clients inside the clinic to allow social distancing and avoid overcrowding in line with the Covid-19 restrictions<sup>32</sup>. In resolving the unfavourable exposure issues, participants suggested the creation of shelters outside the facilities to limit exposure to rain and sun.

The pregnant women in this study also revealed that the filing system and the process used to retrieve the clinic cards were inefficient regarding time and patient care. The administrator took a long time to retrieve some files, while some could not be found, which led to the creation of new files for other women. Loss of documentation and incomplete records in a health care system results in a lack of continuity in care leading to poor patient care. Although the shortage of files was not a challenge in the current study, the study conducted in Limpopo Province in South Africa found an inadequate supply of recording material in health care institutions, making it difficult for health care providers to record health care activities<sup>33</sup>.

The current study's shortage of staff and the flawed administrative process resulted in slow service provision and long waiting times. Pregnant women had to wait long for the files to be retrieved and for the few available staff to see them and other clients, while some ended up returning home because there would be no time to see them. A similar study conducted in KZN<sup>16</sup> found that pregnant women were delayed in receiving ANC because they had to wait for midwives who performed multiple programs in the facility. Some had to be returned home unattended<sup>16</sup>. The long waiting results in women skipping meals or purchasing food if they did not pack food ahead<sup>31,34-37</sup>. The purchasing of meals might be a financial burden for women who cannot afford the cost of food. The time spent at the facilities could be an unconscious barrier to accessing care, as some women might decide not to come for ANC<sup>37</sup>. The finding is endorsed by a study conducted in Mbombela, which found that pregnant women were reluctant to seek ANC early as they were demotivated by the long time spent in health care facilities. These women preferred to seek ANC care in private facilities where they were treated fairly and on time<sup>26</sup>.

The study also revealed that pregnant women were not given first preference at the facility and were unimpressed by the fact that they had to wait outside with other clients. They expected to be seen first because they were pregnant. Although the women in the current study were not in labour, the findings correspond with those elsewhere in South Africa, where pregnant women in labour were made to wait in the queue. Furthermore, the women were not monitored, felt neglected, and were not considered essential patients<sup>29</sup>.

The pregnant women suggested that the facilities recruit sufficient human resources to offer quality health care in all service areas. The recruitment is envisaged to reduce the waiting times. For ANC to be rendered sufficiently with high-quality standardized care, staffing should be improved<sup>16</sup>. Not improving human resources in public health facilities hinders service delivery<sup>16,26</sup>. Furthermore, the study suggests that the ANC service should be improved by allowing pregnant women to have their queues and be attended to quickly, so they return home and rest. Finally, the women recommended that the filing system be improved to allow easy retrieval of files. Medical records are essential in healthcare because they incorporate all vital patient

information and largely contribute to delivering high-quality health care to patients<sup>38</sup>. The manual data management, mainly paper-based records, was perceived as poor patient information storage. It results in inconsistent retrieval and loss of records due to insufficient storage as paper-based records consume more space<sup>38,39</sup>. Therefore, the introduction of electronic patient health records was recommended by participants as an efficient method of storing information that could work very well in communication between health care providers. In agreement with the participants, a study conducted by Malakian et al<sup>30</sup>, indicated the use of health information systems as cost-effective and a means to improve the overall quality of public health care services. Patients can move easily around the country without losing their health history because it will be safely available to other health professionals through the network<sup>39</sup>.

## Conclusion

The pregnant women in the study did not enjoy the ANC due to a shortage of staff members and medical supplies, the hostility of staff members, and long waiting times. They viewed such challenges as unacceptable and the service as unaffordable because they were expected to buy medicinal supplements to sustain their nutritional needs during pregnancy.

## Recommendations

To improve the quality of ANC, some recommendations were made. The Department of Health must ensure the availability of shelters around primary health care facilities in times of pandemic restrictions to protect those coming for health services, including pregnant women. Health workers should be counselled by their immediate managers to demonstrate respect and genuine interest to the pregnant women and avoid harsh and arrogant attitudes. Health workers should render ANC services timeously without letting pregnant women join long queues to access services. The procurement of medicinal supplies must be strengthened to support pregnant women who may not have money to buy those medicinal supplements. Since the study was conducted during the Covid-19 pandemic, a follow-up study may be necessary to establish if the



situation has changed and to extract lessons learned to inform future programming.

## Limitations

The study was conducted in only two Gauteng Primary Health Care facilities. As a qualitative study, the results cannot be generalized to the whole of Gauteng Province. During interviews, the researchers also experienced telephonic network failures, making some interviews run for more than two days in other circumstances. Even though the experience of network failures was unpleasant, participants accepted the inconveniences caused by the processes. The researcher is unsure if the break could have made participants forget some of the points they could have raised in the initial interview. However, the researcher collected data over three months to ensure that rich data was obtained from participants.

## Ethical considerations

Ethical approval for the study was received from the Sefako Makgatho Health Sciences University [Ethical clearance number: Reference #SMUREC/H/204/2020:PG]. Prior to the commencement of data collection, permission was sought from the Gauteng Department of Health, the District manager for Region D Primary Healthcare facilities, and the Operational managers of the two sampled facilities. Participants' verbal and written consent was obtained before data collection. Confidentiality, as well as anonymity, was ensured by using pseudonyms. The age of the participants was put in ranges rather than real names, and facility names were written as either Facility A or Facility B. The researchers also observed ethical principles such as voluntary participation, withdrawal with no penalty, respect for autonomy, beneficence, and justice and adhered to them. Adherence to Covid-19 protocols as stipulated by the facility was ensured in protecting participants from Covid-19 infections<sup>32</sup>.

## Conflict of interests

The researchers declare that no conflict of interest influenced them in publishing the manuscript.

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for the study. All the antenatal women who participated in the study from the two facilities are also acknowledged for their participation during the Covid-19 lockdown.

## Author contributions

All the authors were involved in the conceptualization of the manuscript: LT drafted the manuscript, wrote the methodology, DM collected and analyzed the data, IM wrote the introduction and the background of the manuscript, and SMM wrote the results and the discussion section. All authors proofread the manuscript and permitted the publication of the manuscript.

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