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Lived Experiences of Antenatal Services Utilization among Pregnant Women during COVID- 19 Pandemic

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ABSTRACT

Background & aim: The process of country lockdown, social distancing and limited access to services as a result of COVID-19 pandemic brought a change to established patterns in the antenatal care services in the primary health care systems. The current article presents the lived experience of utilization of antenatal services among pregnant women during covid-19 pandemic.

Methods: A descriptive phenomenological design was used to elicit data from 12 pregnant women. Pregnant women who booked in healthcare services were recruited from Gauteng and Limpopo province in South Africa using a purposive and snowballing sampling method. The data were collected and recorded from July to August 2020, either through the telephone or e-platforms (Zoom and google meet). The recorded data was transcribed and analyzed using the steps outlined by Sundler et all.

Results: Four themes emerged from the analysed data. Three themes focused on the experiences of the pregnant women showing the negative impact of the COVID-19 pandemic on antenatal services including: fear of contracting COVID-19 during antenatal; limited available antenatal services and coping with the new normal. The fourth theme is need for digital health education which focused on the antenatal services development.

Conclusion: The study showed that the covid-19 pandemic negatively impacted utilization of antenatal services among pregnant women. It is therefore important for the health departments to adopt innovative ways to improve utilization of antenatal services among pregnant women during a pandemic situation such as the COVID-19 pandemic.

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Introduction

The highly contagion Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2) caused devastating effects globally. Public health measures to reduce person contacts such as social distancing, wearing of masks, washing of hands, and in some cases lockdown of the countries were put in place to curtail the spread of SARS-CoV-2(1). The process, length, and severity of lockdown vary from country to country (2). In South Africa, the lockdown process is implemented in stages from level 5 to level 0. It is said that the method of South African Lockdown is one of the hardest in the world. The country closed its borders, schools, and businesses. Movement within and outside the country was restricted within the level 5- 3 of the Lockdown. Non-essential medical procedures were deferred to later times. The antenatal care services though not explicitly deferred were affected as a result of the country's lockdown rules (3, 4). In South Africa Hospital to take care of Covid-19 patients were designated. Hospital visitations were cancelled and the communities were made aware through media such as radio, print media, television and social media. There were however no

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mechanisms put in place or protocols on how pregnant women were going to be managed. Pregnant women were expected to continue with routine antenatal care, childbirth and postnatal clinic visits. The service providers ensured social distancing, strict washing of hands and sanitizing including the wearing of masks. Patabendige, Gamage (5) assert that lack of information on adaptive response and preventive strategies on how to cope during infectious epidemics was found as a major drawback globally.

Antenatal care is one of the most essential services during pregnancy towards a successful outcome. Quality antenatal service can avert complications that may arise during the pregnancy and contribute to the positive experience of the pregnant women (6). Evidence has shown that quality antenatal care is dependent on factors such as accessibility (7), the number of visits to the clinic and the services available during the visits (8). Services rendered during antenatal clinic determine the success of the pregnancy and they entail, history taking, checking of weight gain, blood tests, abdominal palpation, nutritional assessment, health education and antenatal exercises.

The WHO 2016 ANC model recommends that a pregnant woman should have at least 8 contacts with the clinic during the period of pregnancy (9). South Africa adopted the basic antenatal care approach (BANC) which entails that antenatal care is available every day at the primary health centre to ensure accessibility to all pregnant (10, 11). However, the compliance to Covid-19 level 5 pandemic restrictions such as lack of transport, social distancing, isolation and quarantine measures, wearing of masks and strict washing of hands and sanitisers affected the utilization of antenatal care services by women.

The study was part of a larger study that explored the experiences of pregnant women during the COVID- 19 pandemic to develop strategies that can be utilised to assist pregnant women during further pandemics and any type of unforeseen disasters. The purpose of this article is to present the lived experience of utilization of antenatal services among pregnant women in the COVID-19 pandemic.

Materials and Methods

The study used a descriptive phenomenology. Due to the lockdown restrictions as a result of the covid-19 pandemic, the one on one interviews were conducted either telephonically, through zoom or google meet among pregnant women around Gauteng and Limpopo province. Gauteng province is an economic hub while Limpopo province is the food basket of South Africa.

The pregnant women were identified through snowball sampling a type of network sampling (15). The researchers identified a pregnant woman who referred her to other pregnant women that she knew. The snowball continued as more women continued to be recruited through referrals from people who knew pregnant women. The pregnant women were reached telephonically and the research was explained to the participants who were recruited to participate in the study.

The inclusion criteria were all women who were 2 months+ pregnant and are booked for antenatal services.

The study received ethical approval from the University's Ethics Committee 297/2020. Each participant had the opportunity to continue or decline the study after a thorough explanation of the study. Each participant gave verbal consent to the study. The participants were not forced nor lured to participate in the study.

Data were collected using in-depth interviews. According to the lockdown restrictions, social science researches that involved physical contact with people were either cancelled or moved to digital platforms. The researchers used digital platforms such as Zoom or google meet and telephonic conversations as data collection methods. One of the researchers, contacted the participants telephonically before the interview day to explain the research and to seek consent to be involved in the study.

The participants and the researcher chose a convenient day. The interviews were conducted in the daytime in the month of July and August 2020. The participants were given a call to remind them of the interview and given another opportunity to either continue with the study or decline from participating in the study. Each interview was recorded after consent from the participant and lasted between 45- 50 minutes.

The pregnant women were asked the questions below Describe your antenatal experience in the covid-19 pandemic and give suggestions on what they would have loved to be done differently?

The participants responded differently to the main questions however, the researcher probed further to enrich the discussions and illicit more information and stopped after data saturation when there was no more new information. The method of interviewing telephonically, through zoom or google meet had its challenges such as the inability to recruit more participants. It was also difficult to observe the mannerism and cues of the participants as expected in a physical one to one interview.

One of the researchers listened to the recorded interviews repeatedly before transcription. The transcription of the interviews took place during and after the data collection. Each of the interviews was transcribed by one of the researchers and an independent transcriber. The Atlas ti9 was used in organizing the transcribed data. The researchers analysed the data based on the outline suggested by Sundler, Lindberg (13) on the analysis of descriptive phenomenology. The researchers while not completely distancing themselves from the subject of antenatal care that is been explored among the pregnant women were able to probe and examine their existing knowledge on antenatal care services. This is to further prevent bias when analysing the data. The researchers familiarized themselves with the data by reading and reading the transcribed data. The data was reduced through making meaning and grouping of the similarities. Similar themes were grouped to form four main themes.

To ensure the credibility of the research data, Member checking was done with the participants. They were asked to validate the transcribed data to ensure that the data is the intended meaning of the participants. Dependability of the study was ensured by writing in detail the steps in the research process of the study.

Results

Four main themes emerged from the findings on the lived experienced of utilization of Antenatal services among pregnant women during COVID-19 pandemic. The first theme centred on the Fear of contracting covid-19. The second theme is limited antenatal services. The third theme is coping with the new normal and the fourth which is the last theme is the suggestion on improving antenatal services.

Table 1. Demographic Characteristics of the Participants

Participant	Parity	Employment status	Marital status	age		
1	G2P1	Student	Married	34		
2	G2P1	Student	Married	36	**Mean**	31.083333
3	G1P0	Wedding Planner	Single	29	**Standard Deviation**	3.3154825
4	G3P2	Retailer	Married	31	**Standard Error**	0.9570974
5	G2P1	Sales representative	Married	30		
6	G3P2	Unemployed	Married	32		
7	G1P0	Part time waiter/student	Single	25		
8	G2P1	Unemployed /student	Married	35		
9	G2P1	Self employed	Married	31		
10	G2P1	Unemployed	Single	27		
11	G2P1	Teacher	Married	34		
12	G1P0	Teacher	Single	29		

Each theme written below were supported with quotes from the participants.

Demographic findings

The table below describes the demographic variables of the participants that took part in this study. From the participants ten (10) were married and 2 were single. The detailed demographic characteristics of the participants can be found in Table 1 and Table 2.

Table 2. Gestational Age

Participant	Gestational age (weeks)	Residential area		
1	24	Urban	**Mean**	22
2	24	Urban	**Standard Deviation**	4.592483978
3	20	Suburb		
4	14	Suburb		
5	26	Urban		
6	18	Urban		
7	22	Township		
8	26	Urban		
9	16	Suburb		
10	20	Township		
11	24	Suburb		
12	30	Urban		

Theme One: Fear of Contracting Covid-19 During Antenatal

The first theme that came up from the study was fear of contracting Covid-19. The subthemes that emerged were as follows

Reduced number of antenatal visits and late bookings

The majority of the pregnant women in the study abstained from attending the antenatal clinic as scheduled for the fear of contracting the disease. Their fear impacted the time they booked at the clinics for antenatal care.

"how am I going to go to the clinic? "……. the fear of the covid. It took me a lot of time. It took me like four months before I could say I need to go to the clinic for my antenatal. So, I waited for four months before attending an antenatal it was scary- (Participant" 2).

"Anyway, before I started going, the way at which the virus has reduced drastically before I started going. I think it was like 1000 plus before I started going and stuff like that".
– (Participant 5).

Rates of infection in the country

The pregnant women highlighted that one of the major reasons for not attending the antenatal clinic is the fear which was exacerbated by the surge of the daily numbers of Covid-19 infection rate that were recorded in the country and shown in the media. This was corroborated by one of the participants who said she waited for the number of infections to go down before she attended the clinics. She said:

- "I think it was like 1000 plus before I started going and stuff like that. I think I was not afraid again." – (Participant 5).

One of the pregnant women said that the husband was so afraid of the virus, he did not want her to leave the house for any reason. He was afraid that she may contract the virus and infect their unborn child. To make it worse, there was no information regarding infection among pregnant women. This made her stay indoors and not attend the clinic regularly.

"So, he made sure that I didn't step out because he was like you are at high risk because you are pregnant"-(Participant 8).

Overcrowding at the hospital

Normally, in the primary health care centres and public hospitals where pregnant women attend antenatal services, there is a high volume of people. The pregnant women cited overcrowding which would not allow proper social distancing as one of the reasons for them not to attend the antenatal clinic. Some of the participants said:

"I went there when I discovered I was pregnant. The queue was so long. I did not go there again" -(Participant 3).

"Different kinds of people go to the clinic for treatment and we all queue together. You are not sure of who you are on the queue with. That really scared me a lot". – (Participant 7).

"I actually opted not to go to the clinic or the hospital because I was afraid if I go there, I will meet many people, and be in close contact with people who may be infected. When I came back the rate of COVID-19 was just high so I could not take the risk at that time because now I have seen the risk and the seriousness of the situation"- (Participant 12).

Use of public Transport

Aside, the overcrowding at the clinic getting to the hospital with public transport was another risk that was stated as a factor that added to the fear of contracting the virus and hence staying away from the antenatal clinic. One of the messages that were delivered as part of the preventive strategy was to avoid the three Cs which are Crowd, Close space and Close contact with other patients in a taxi it is difficult to maintain social distancing. We are in close contact with each other, and we are in a closed space where the movement of air is restricted making it easier for one to contract the virus. Some of the participants verbalized it as follows

"I was afraid to go to the clinic because the clinic is far from my house. I have to take two taxis and I don't know the people I will meet in the taxi". (Participant 10).

"The worry, the worry of maybe me being infected at that moment, because okay we are in a taxi now, everyone is sitting close to each other, we are all holding that door. Everyone we, it's not just me, remember, it's not just because we're using public transport, we are many. So, it's not just it's not it's unlike I'm in my car driving my car. So, it's like everyone's there. The germs are there, the whole taxi might be exposed to the coronavirus let me put it like that. So, I. I would about worry that". (Participant 7).

Theme Two: Limited Available Antenatal Services

The second theme that emerged is limited available antenatal services. Multigravidas in South Africa are familiar with the routine testing and services in the antenatal clinic. Two sub-themes from the themes are altered routine services and Lack of health education.

Altered routine services

Despite the fear of contracting the covid-19 virus due to overcrowding, transportation and rising infections; some of the pregnant women in the study acknowledged that when they eventually attended the clinic many of the services available to the pregnant woman such as taking of blood for tests antenatal exercises health education were unavailable.

"You find out that we do HIV tests, with my first baby when I go for a clinic visit they used to take us for HIV each time, But, this time I only did it twice or three times. It is not even more than five times it is different. And I think they are trying to make sure that people don't stay at the clinic for long"- (Participant 2).

"No, because I've seen how the clinics work now since ever since the pandemic started, ever since the coronavirus started. So they are trying, by all means, to not expose people to the virus as much as possible you know. They check only our BP, how the baby is doing every other routine like HIV or blood screening was limited to only the first time I went. I am not sure if it is supposed to be regular this is my first baby"- (Participant 7).

Lack of health education

Pregnant women expected the health education that comes with antenatal care but unfortunately, this was cancelled.

"There were no antenatal classes. So, we were left to google out information on our own. Being my first pregnancy, I had lots of questions".
– (Participant 12).

"No, they are not teaching us anything at all. They are not even talking about the covid-19. There are no antenatal classes" – (Participant 6).

Theme Three: Coping With the New Normal

The covid-19 pandemic came with new public health rules that were not very comfortable for pregnant women. Two subthemes emerged

Discomfort with wearing of masks

Some of the pregnant women complained of having to wear masks when outside their homes has been uncomfortable. As highlighted in the quote below:

"I use the mask. And it does make me pant for breath. I remember there was a day I was suffocating while waiting for my turn to see my gynae. Thank God I had water in my bag that day"- (Participant 8).

Table 3. Themes and Sub-Themes

Sub-Themes	Themes
Reduced number of antenatal visits and late booking	Fear of Contracting COVID-19 during antenatal
Rate of infections in the country	
Over-crowding at the hospital	
Use of Public Transport	
Altered routine services	Limited available antenatal services
Lack of health education	
Discomfort with wearing of masks	Coping with the new normal
Restricted movement	
Necessity of having WhatsApp group with midwives	Need to digital health education
Need to a specific App for pregnant women's health education	

"We have to adjust our lives wearing masks, sanitize and all those things. Mind you, Number one, the mask is, is, hot, if I may put it like that, it's hot. And now in my case, I have a short breath. I have to accommodate that as well, you know, but with the fear of me catching the Covid going outside without wearing a mask, it's a risk both to me and the baby" (Participant 3).

Restricted Movement

Apart from the mask making going out very uncomfortable, the restricted movement imposed by the lockdown rules from the government makes the antenatal period very challenging. The pregnant women complained of the inability to move freely affecting the antenatal attendance.

"You will find out that I have to wait till around 4 or 5 pm because they have closed by 9 am. I don't remember what the time is exactly but I will have to walk to the main road where I have to take a taxi. We sometimes just take a lift. People coming from wherever they are coming from, we just take a lift to go home from the clinic"- (Participant 6).

This restricted movement made the pregnant women reluctant to go to the hospital if they don't have their transport.

"In level 5 I went only once, I had to ask for someone to take me there. I had to ask my brother to take me to the clinic with what you call like I ask someone to do a letter for me to show that I have to go to the clinic and there is that maternity book that we use to use. I showed the police that one that I am going for a visit. I have to go there"- (Participant 7).

Theme Four: Need to Digital Health Education

The pregnant women in the study made some suggestions that they believe would improve the antenatal services during the pandemic.

Necessity of having WhatsApp group with midwives

Though the department of health has an existing app known as MomConnect that keep the record of pregnant women and remind them of the antenatal appointment. This app is limited in providing pregnant women with health education. They, however, suggested that they

could have WhatsApp groups with the midwives.

"If we can have a WhatsApp group this will go a long way to help with the questions that we may have". – (Participant 2).

Need to a specific App for pregnant women's health education

Another pregnant woman suggested that if there is an app that can have health education for pregnant women.

"It would be nice for us to have a health education app for pregnant women. Instead of us googling out information for ourselves. Some of this information, you are not even sure if it is correct. But if it is coming from the department of health and there is the question-and-answer section to it, you can clarify what you don't understand". – (Participant 12).

Discussion

This study provides empirical evidence on the lived antenatal experience of pregnant women during the covid-19 pandemic in South Africa. Like many other countries, South Africa responded to the Covid-19 Pandemic by locking down the country and limiting activities that would increase interactions between the public. Though, the government of the country did not shutdown primary health care services especially maternal and child health services; The findings from our study showed that it is not enough to leave the doors of the primary health care services open but other factors can ultimately affect the experience of the pregnant women need to be addressed. Fear of contracting the virus and sudden change to the way of life negatively affected the antenatal experience of pregnant women.

Fear as identified by psychologists is an adaptive factor that ensures balance in our daily living (16, 17). However, when fear is not well managed it becomes a negative factor that affects the balance of life. The number of infections and statistics of deaths triggered fear in pregnant women. Hence, attendance at the antenatal clinic became a secondary issue to pregnant women when compared to preserving their lives from contracting the SARs-CoV2 virus. This is consistent with the report of Kotlar, Gerson, Petrillo, Langer and Tiemeier (2021) conducted a scoping review on the impact of the COVID-19 pandemic on maternal and perinatal health and discovered that antenatal attendance dropped for different reasons and one of such is fear of contracting the virus.

Deferring the attendance to the antenatal clinic resulted in late antenatal booking. Pre-covid -19 pandemic late antenatal booking has been a challenge in Africa and is implicated as one of the factors leading to maternal mortality (18, 19). Unfortunately, inconsistent with the findings of Chmielewska, Barratt (20) late antenatal bookings worsened during the pandemic. The findings of our study can be deduced to provide a context for the 30% increase in maternal mortality during the pandemic (21).

Attendance to the clinics and primary health care centres would mean that the pregnant women would meet with other people in the hospital or clinic premises during the pandemic. Presence in the hospital premises aggregated the fear of contracting the virus because they will be in close proximity with people. The clinic is opened to every type of person aside from pregnant women. One of the findings from our study is that pregnant women avoided the clinic because of overcrowding. It is almost impossible to observe the public health preventive measures of social and physical distancing in an overcrowded hospital (22). Overcrowding in the hospital has been cited as a factor in the delivery of poor patient care in public hospitals in South Africa (23, 24).

Another factor highlighted in the study as contributing to their fear and negating the principle of physical distancing is the use of public transport. Some of the pregnant women do not own their transport and have to travel in public transport. The fear of the pregnant women in the study can be justified as studies such as Abdullah, Ali (25) and Shen, Duan (26) have identified public transport as hot spots and quick spreader of the virus. Hence to improve the antenatal experience of pregnant women in the subsequent pandemic, means of transportation among those without private transportation need to be provided.

Non- attendance to the antenatal clinic or late bookings based on fear is enough to affect the positive antenatal experience in the study but

getting to the clinic and not receiving the anticipated services during their antenatal visits further impacted their experience. Health education class is one of the highlights of antenatal care services. Pregnant women are taught what to expect during pregnancy, labour and after Birth. Antenatal classes were, however, cancelled during the pandemic to ensure physical distancing and reduce the risk of infection during an antenatal visit. The first-time pregnant women were, however, particularly worried about the antenatal classes which were not available. They wished to get a personal touch from the midwives. This finding agrees with studies that stated that antenatal services were such as health education, routine screening such as HIV testing were reduced (27, 28).

In addition to the limited antenatal care services impacting the lived experience of pregnant women is the feeling of discomfort that comes with wearing of mask in public places. As part of the public health measures to be observed in the bid to reduce the spread of the virus is wearing masks in public places. The wearing of the mask came as a sudden change to everyone and it required adjustment. For the pregnant women in our study coping with the new normal emerged. Discomfort in the wearing of masks in public spaces was identified by the pregnant women as challenging and uncomfortable. The women highlighted that the state of being pregnant increased their heat production and now they have to wear a mask that would produce additional heat which adds to their discomfort. Scheid, Lupien (29) identified that though prolonged use of masks has little effects on physiological need; It causes discomforts in non-pregnant women. The discomfort of wearing a mask limited the freedom.

As part of the public health measures to reduce the rate of transmission people were restricted from visiting each other and exercising in the public. The pregnant women cited this as a challenge because they could no longer exercise freely. Exercising is one of the important activities in pregnancy that aid in having quick labour and reducing the rate of pregnancy complications. Not being able to exercise was a great concern to the women. According to Riley, Ellis (30), the restrictions in the movement added to the anxiety and stress of pregnant women.

Participants suggested that they need more health education regarding their pregnancy. They came up with suggestions such as maximising the use of a program called Mom-connect which reminds them of dates to attend an antenatal clinic by including health education messages that can be sent to pregnant women daily. They also felt WhatsApp can also be used as a vehicle for health education. Methods of E-teaching and E-learning have gained momentum during Covid-19. The use of digital platforms can assist in health education.

It is recommended that mechanisms such as digital platforms, mom-connect, telehealth can be used to assist pregnant women during a crisis such as pandemics or unrest in the country that may prohibit them to attend antenatal care. The hospitals and clinics must devise new methods of antenatal attendance that will allow social distancing such as booking appointments to allow a few numbers to visit the clinic. Evidence-based masks which are made of good and comfortable materials must be recommended for pregnant women. South African primary health care must include programs such as home visits to enable them to assist women at home.

Conclusion

The study showed that pregnant women experienced fear of contracting the COVID-19 virus. As a result there was reduced utilization of the antenatal care services during the COVID-19 pandemic.

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Conflicts of interest

Authors declared no conflicts of interest.

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