Impact of COVID-19 on Access to Maternal & Newborn Health Services in Karachi

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Abstract

This study is a qualitative exploratory research which uses Penchansky and Thomas' 'Theory of Access' and Saurman's 'Proposed Dimension of Awareness' to investigate how the COVID-19 pandemic has affected access to maternal and newborn healthcare services provided by private hospitals in Karachi. It aims to focus specifically on the lockdown (third week of March – mid August 2020) as well as the post lockdown period in Karachi. Through in-depth interviews and document analysis of the Government of Pakistan's Guidelines on Sexual, Reproductive and Maternal Health Services during COVID-19, this study aims to understand the extent to which new mothers' access to said services has been affected. It also aims to explore how successful initiatives such as helplines and online health clinics have been in bridging the access gap created by the pandemic and, how the provision of these services has been affected at hospitals. Themes such as requirement of in-person visits, scare factor, disregard for SOPs, and high-risk pregnancies, emerged from this study. The study found that majority of the new mothers were able to access maternal and newborn healthcare during COVID-19 in Karachi, but with more difficulty than usual. Online health clinics/sessions proved to be useful for the new mothers who availed them, however, most of them preferred in-person visits. Moreover, there is only a certain extent to which helplines and online health clinics can help, since patients have to visit hospitals for ultrasound and antenatal appointments as well as any other physical examinations.

Keywords: *access, maternal and newborn healthcare, Karachi, COVID-19 Pandemic, urban*

Introduction

Pakistan has the 2nd highest maternal mortality rate in South Asia (Saharty et al., 2015). However, according to the 2019 Pakistan Maternal Mortality Survey, the country has made progress as its maternal mortality rate (MMR) decreased from 276 deaths to an average of 186 deaths per 100,000 live births (DAWN, 2020). Punjab has the lowest MMR with 157 deaths per 100,000 live births, KP stands at 165, Sindh at 224 and Balochistan at 298 (DAWN, 2020). The preceding provincial breakdown shows how this improvement has been uneven across Pakistan. The country faced difficulty in achieving Millennial Development Goals (MDGs) 4 and 5 (Reduce Child Mortality and Improve Maternal Health respectively) despite efforts such as the National Maternal, Neonatal, and Child Health Strategic Framework in 2005, the National MNCH Programme in 2007 and the extension of primary healthcare services through lady health workers (NIPS & ICF, 2019). Achieving the relevant areas for Sustainable Development Goals (SDGs), particularly Goal 3 (Good Health and Well-being) by 2030 will require more stronger commitment compared to previous attempts to achieve MDGs. With the COVID-19 pandemic, provision and access to maternal and newborn health services is expected to worsen further.

In response to COVID-19, the Government of Pakistan imposed a nationwide lockdown in the third week of March (Sarwer et al., 2020). In Sindh, a lockdown was imposed on 22nd March 2020 and there was a ban on the movement of persons, with the exception of essential purchases and medical care (The Collective for Social Science Research & Center for Reproductive Rights, 2020). Public transport services were also suspended in Karachi. Many hospitals, especially private facilities, suspended their outpatient department services (OPDs) and elective surgeries (Sarwer et al., 2020). Sexual and reproductive health services (SRH) were deprioritized as resources were diverted to deal with the COVID-19 crisis (CSSR & CRR, 2020). It is expected that during this

time, health service departments were affected, particularly gynecology and obstetrics, which in turn could have led to an increase in maternal and child mortality rates, as well as a decline in child vaccination and immunology practices (Sarwer et al., 2020). According to a study published in The Lancet, it is estimated that COVID-19 might lead to a 31 percent increase in infant and maternal mortality in Pakistan in 12 months if the health services remain suspended (Bhatti, 2020). However, around May 2020, this lockdown was eventually eased by the Sindh Government when they allowed movement and reopened public places in some areas.

This study discovered that while most of the participants were able to access maternal and newborn healthcare during COVID-19 in Karachi, they still faced some difficulty in doing so, and most healthcare professionals' hospitals used federal government guidelines. Online health clinics/sessions proved to be useful for the new mothers who used them, however, most of them preferred in-person visits. Moreover, there is only a certain extent to which helplines and online health clinics can help, since patients have to visit hospitals for ultrasounds and antenatal appointments, as well as any other physical examinations. Themes such as requirement of in-person visits, other alternatives, scare factor and disregard for SOPs, high-risk pregnancies, compromised aspects of maternal and newborn health services such as family planning, contraception, routine checkups, post maternal fetal care, as well as support systems emerged from this study.

First, this study describes the theoretical framework used, and delves into the sampling and recruitment process, as well as limitations of the study. The paper lists the methods and materials used and moves on to the results and discussion section that includes thematic analysis. Finally, in the conclusion section, it puts forth recommendations on ways to improve telemedicine and online health services in Pakistan, while giving examples of initiatives taken by Brazil and Nairobi to increase access to maternal and newborn healthcare during the COVID-19 pandemic.

Theoretical Framework

The study uses Penchansky and Thomas' theory of access which argues that access can be optimized by taking into account five different dimensions; accessibility, availability, acceptability, affordability and adequacy (Penchansky &

Thomas, 1981). Penchansky and Thomas define accessibility in terms of location by stating that an accessible service should be within reasonable proximity to the consumer in terms of time and distance. They define availability in terms of supply and demand, stating that an available service has sufficient services and resources to meet the volume and needs of the consumers and communities served. Acceptability is defined in terms of consumer perception and as such, an acceptable service is viewed as one which responds to the attitude of the provider and consumer regarding characteristics of the service, as well as social and cultural concerns. Affordability is defined in terms of financial and incidental costs. An affordable service is seen as one which examines the direct costs for both the service provider and the consumer. Finally, adequacy is defined in terms of organization since an efficient service has to be well-organized to accept clients, and clients should be able to use the services (Saurman, 2015).

This study will also use a sixth dimension proposed by Saurman (2015), which is awareness. Awareness is defined by Saurman in terms of communication and information, since a service maintains awareness through effective communication and information strategies with relevant users, including consideration of context and health literacy. All of these dimensions will be employed to assess whether helpline or online health clinic initiatives have been successful in bridging the access gap created by the pandemic.

Sampling and Recruitment

Both direct and indirect recruitment were used for this study. Sampling was done on the basis of multiple criterion; new mothers had to be based in Karachi, should have availed maternal and newborn health services during the COVID-19 pandemic, and could have/have not availed the use of helpline or online health clinic services. Healthcare professionals had to be based in Karachi and had to be gynecologists or doctors who were working in the gynecology department during the pandemic.

Four new mothers and three healthcare professionals were recruited for this study. The mothers will be referred to by the following pseudonyms: Sarah, Zainab, Zoha and Asma. They are 32, 25, 25 and 33 years old respectively. All four new mothers reside in Karachi's District South and belong to an urban background.

All of them availed maternal and newborn health services at private hospitals. Sarah is a singer/songwriter and she had her delivery in December 2019, but was availing these services for her newborn during and after the lockdown was lifted. Zainab is a dentist and she started going for maternal appointments from January 2020. Zoha is currently a homemaker (she was a lawyer prior to becoming a mother) and her pregnancy began in January. She started availing these services from February and continued to do so during the lockdown. Asma is a teacher and availed these services in July/August 2020 during the lockdown.

The three healthcare professionals will be referred to by pseudonyms Sadia, Alina and Hafsa. Dr. Sadia is a gynecologist at a private hospital, Dr. Hafsa is a gynecologist who works in a public hospital in Karachi, as well as other urban centers all over Pakistan, and Dr. Alina was working in the gynecology department of a private hospital as part of her house job[1].

Initially, in-person interviews were planned for healthcare professionals, however, due to COVID or the interviewee's busy schedule, the primary data collection method had to shift from in-person interviews to receiving answers to questionnaires via Google Docs and voice notes on WhatsApp. This was done for two of the interviews, while one was an in-person interview. Due to time constraints, convenience sampling was conducted and hence, the new mothers' sample was not sufficiently varied. The study was unable to include new mothers who availed these services from public hospitals.

Methods and Materials

In-depth interviews

In total, seven in-depth interviews were conducted for this study; four of the new mothers and three of healthcare professionals. For the latter, one of the interviews was conducted in-person, while the rest were conducted via Zoom, WhatsApp and Google Docs. Quotes taken from these interviews have been translated into English, where the answers received were either in Urdu or both languages.

1 A year-long clinical experience under supervision of senior physicians' right after graduation from a medical college.

However, special care is taken to ensure that the meaning of the answers does not change during the process of translation.

Government of Pakistan's Guidelines on Sexual, Reproductive and Maternal Health Services during COVID-19

This study conducts a document analysis of the Government of Pakistan's Guidelines on Sexual, Reproductive and Maternal Health Services during COVID-19 which were released on 7th July 2020, on the official website made by the government to communicate updates related to the COVID-19 situation in Pakistan. This document analysis is done to see whether hospitals followed these guidelines.

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Results & Discussion

The study found that new mothers did face some difficulty in accessing maternal and newborn healthcare in Karachi during the COVID-19 pandemic, especially for routine checkups, during and after the lockdown. However, most of the new mothers had no option but to physically go to the hospital and avail these services. Four new mothers (Zoha, Asma, Zainab & Sarah) were interviewed to understand how access to these services was affected during the lockdown, as well as after it was lifted. All four participants were availing these services from private hospitals. Sarah had her child's delivery in December 2019, hence all of her pregnancy appointments, and subsequently her delivery were done prior to the lockdown, but her newborn still needed to avail these services. She admits that access to these services was affected during the lockdown: "*Yeah, completely. I think just the frequency of the access was the biggest challenge, since it wasn't as easy to just get up and go with my husband and just get the checkups done.*" The temporary suspension of OPD services also further affected access: "*Like I said earlier, some doctors were just not available. So we had to wait till the situation kind of settled and*

the risk was a little lower and the doctors were available."

Zoha started to avail these services prior to the lockdown and continued to avail them during as well. For her, access was not really affected because of the lockdown: *"…these services were still accessible during the lockdown and when the lockdown was lifted they were definitely accessible"*. She recalls that lab timings were shorter during the lockdown, but this did not affect her as much. However, Zoha had contracted COVIDtowards the end of her pregnancy and she described how contracting the virus affected her access to these services: *"...I got COVID myself... and of course because of that, I couldn't meet any doctor and also had to change my doctor at the very last minute, for which I also used online services because if you have COVID, the hospital will only see you online*)." She mentioned that her doctor was reluctant to deliver her baby and she had to find another doctor last minute: *"... but when I got COVID he was a little reluctant to do my delivery, because I contracted COVID in my 39th week and even though he had done COVID deliveries, I don't know he just seemed skeptical"*.

Asma did not really face any difficulty in accessing these services during the lockdown. She mentioned that her lab tests were not affected and all of her maternal appointments were in-person. Zainab was going for maternal appointments since January 2020; she had a few appointments before COVID, but most of them were during the pandemic. After the lockdown was imposed in Karachi, she still had to go to the hospital for appointments, but her doctor tried to limit her visits.

Helplines and Online Health Clinics

One of the main objectives of this research is to see whether helplines and online health clinics were successful in bridging the access gap created by the pandemic. The pandemic encouraged and sped up the development of the tele-health sector. The suspension of outpatient services in many hospitals in Sindh led frontline healthcare providers to use WhatsApp and Zoom for online consultations, including antenatal appointments (CSSR & CRR, 2020). Organizations such as Sehat Kahani, Aman Foundation and the Society of Obstetricians and Gynecologists of Pakistan's (SOGP) tele-health initiatives were essential during this time. However, frontline healthcare providers mention that many patients did not own smartphones or have access to internet, highlighting the need for digital literacy and better access to technology and digital communications (CSSR & CRR, 2020). Female doctors have reported that they experienced harassment,

and this has discouraged many of them from providing their services through such platforms. Pakistan does not have a proper legal framework or government regulations for telemedicine which hinders the provision of these services by healthcare providers (CSSR & CRR, 2020).

ut of the three healthcare professionals that were interviewed, Dr. Hafsa explains how her hospital had set up telemedicine desks because of COVID-19. Her hospital had set up three lines/telephone numbers; WhatsApp, landline and another line. One is 24/7, while the other two operate for 12 hours. She explained how these lines worked: "*We had these manned by PG (post graduate) year 3 or 4 and she also had the consultant of the day on call. So, if the PG couldn't solve her problem, the case was referred to consultant...*" Dr. Alina explains that at her hospital the gynecology department did not hold tele-clinics, whereas, the pediatric department continued to extend its services through tele-clinics and video calls- not to last for very long. Dr. Sadia mentioned that her hospital had established tele-clinics during the lockdown. These tele-clinics and helplines proved to be effective during the pandemic.

New mothers were asked multiple questions regarding their use of helplines and online health clinics. The questions aimed to understand the five dimensions of access put forth by Penchansky and Thomas which are: accessibility, availability, acceptability, affordability and adequacy, as well as the sixth dimension of awareness proposed by Saurman (2015), to observe whether these helplines and online health clinics were accessible. Zoha used three tele-clinics on Zoom after the lockdown; two were with a gynecologist and one was with an infectious diseases doctor and Zainab used one online health clinic on Zoom. Looking at the aspect of accessibility, both Zoha and Zainab maintained that these online health clinics were accessible. However, Zoha mentioned that she faced connectivity issues during one of her tele-clinics with a gynecologist and Zainab also faced the same problem during her online health clinic. Asma had not used a helpline or online health clinic, but she availed online prenatal classes from a private hospital. She mentioned that these classes were accessible, but she could not attend her first class as the required information was not conveyed to her and she faced difficulty with navigating through the Skype software.

For the availability dimension, Zoha said that the online health clinics did have the required resources to meet her needs. Asma mentioned that for her prenatal classes, they did have the required resources, except that they used

outdated resources such as old light projectors for the online sessions and the material presented was not clearly visible. In regards to the acceptability dimension, Zainab said that the online health clinic did satisfy her perception since it did not require her to go physically, while Zoha also said that they satisfied her perception. Asma mentioned that she faced internet issues and it was hard for her to hear in the online sessions when multiple people would ask questions simultaneously and there was no moderator. However she was happy that the online option was available.

Considering the dimension of afforability, Zoha, Zainab and Asma said that the online health clinics/sessions that they used were affordable. Zoha recalls that one of the online health clinics costed 3,000 (PKR), while the other was 3,300 (PKR), while Zainab mentioned that in her experience, it was much cheaper than physically going to the hospital and costed her 2,000 (PKR). Asma recalls that it was Rs.3500 for 3-4 prenatal classes. For the adequacy dimension, both Zainab and Zoha said that the online health clinics were well-organized to accommodate their concerns. Zainab added that she was informed that the gynecologist was available on those days for teleclinics. Asma also said they were well-organized, but once again mentioned that she struggled a little with the online classes.

In regards to Saurman's sixth dimension of awareness, Zoha, Zainab and Asma were aware that there were other alternatives to the hospital that were providing these services. Zoha was already aware that a private hospital was offering these tele-clinics and her husband had also used it once. Asma found out about the prenatal classes during her first doctor's visit where the nurse had briefed her about them and she was able to find further information from the hospital. Furthermore, all three of them mentioned that they would recommend these

> "*So I would recommend it, if for some reason someone cannot go and they do not need to show something that can only be diagnosed by going to the hospital and just want to discuss something, then they can just take the appointment online.*"

This theory cannot be applied to understand Sarah's data because she did not avail helplines or online health clinics/sessions for her newborn. However, if the dimension of awareness proposed by Saurman is considered, Sarah may not have used a helpline or online health clinic for her newborn because she was unaware that these facilities were being offered.

A challenge faced by almost all of the new mothers was internet connectivity issues. Zoha faced connectivity issues in one of the online health clinics with a gynecologist: *"...we tried for half an hour, but none of us could hear each other and eventually it just got cancelled."* Zainab also said that connectivity issues were a problem and Asma mentioned that she would face difficulty in communicating her questions during class at times since her internet would not work.

When the healthcare professionals were asked about the strengths and weaknesses of helplines and online health clinics, all of them maintained that they avoided in-person visits. Dr. Hafsa stated that if there were simple symptoms such aches and pains, then those would preferably be addressed online. Dr. Alina also gave a similar response: *"if it's a small worry, they can just speak to their doctor [online] and get that sorted and they can be in communication even if they're in some remote part of the country."* Dr. Sadia mentioned that patients' problems are listened to and solved, and they receive more knowledge which they can convey to their family and friends. Dr. Hafsa relayed that if it is a video call, they can see the patient's symptoms and reassure them. However, all of them say that these services get compromised when a physical examination is needed. Dr. Sadia added that for these facilities to work, the patient should have good internet services.

Dr. Hafsa said that telemedicine was accessible for anyone from any background because everyone has a mobile phone. Dr. Sadia mentioned that accessibility wise it was not the same for everyone, but majority did benefit from tele-clinics and helplines. Dr. Alina, on the contrary, said that her hospital receives patients from various backgrounds and telehealth was not accessible for anyone. She mentioned how there are some patients who have no knowledge of technologies and did not have access to it or did not understand it so they could not avail these tele-clinics.

Dr. Hafsa mentioned that the helplines were advertised, but they receive only around 20 to 25 calls per day from women which is less compared to the usual number of patients. However, she feels that this will increase as word-of-mouth spreads. When asked what changes could be made to tailor these facilities to our population, Dr. Sadia answered that internet availability and population awareness would help, while Dr. Hafsa stated that advertising these facilities more and making them more easily available would help in this regard. However, Dr. Alina believes that online health clinics in Pakistan have a long way to go: *"I don't think this country has the infrastructure, the computers, orinternet in all parts of the country to have online health clinics. That's why our OPDs are full and bustling*

right now," she explained.

Overall, there were mixed responses to whether these initiatives were as effective as in-person visits. Zoha mentioned how the two online appointments she took were very important:

> *"Those appointments were really important, such as the gynecologist one because I had to get my delivery done from somewhere and I wanted a second opinion really badly because my 40th week was about to begin. The other one was important because they were the ones who would tell the gynae department if I needed to be in isolation or not... they weren't treating me as a COVID patient during my delivery because of this appointment ..."*

However, she said she would still prefer going in-person. Zainab and Asma mentioned that these online health clinics/sessions were helpful, but they would also prefer going in-person

Requirement of In-Person Visits

Many participants were of the view that helplines and online health clinic initiatives can only help to a certain extent. Zainab said that before the lockdown, she had to go to the hospital because ultrasound appointments can only take place in-person. She stated there are some appointments for which going to the clinic can be avoided and feels that these initiatives were effective until a certain point, but were not effective when she had to go for ultrasounds, as those cannot happen via an online health clinic or helpline. Zoha also mentioned the same concern.

Dr. Hafsa explained that for a pelvic examination or antenatal evaluation, patients have to come to the hospital, since they cannot be done online. Dr. Alina explains that as a doctor you cannot properly diagnose anything via helpline or online health clinic, and that medicine requires you to examine the patient. Moreover, she mentioned that even for radiological investigations, the patient needs to come to the hospital. She further added that these initiatives do not really benefit departments such gynecology:

> *"...because for a field like medicine, both peads and gynae especially, of course, telehealth is very difficult to do because you need to examine the pregnant mother, you need to see an ultrasound so the woman has to come to get her ultrasound done."*

Alternatives

Besides helplines and online health clinics/sessions, new mothers were also using other alternatives. Both Asma and Sarah mention that they spoke to doctors who they knew and asked them for advice during the lockdown. Asma said that she spoke to her family gynecologist on the phone and also met her in-person once. Sarah also mentioned that she had friends who were doctors abroad and she asked them for advice:

> "*Otherwise, you know, our friends are doctors abroad so the only thing we could do is maybe ask them that today there is this symptom, this rash, this is what he is suffering from, what should we do and then they would just give their advice that maybe get something from the pharmacy over the counter...*"

Besides this, Asma also added that she would research from various resources online. Sarah adds that one platform that really helped her was a group on Facebook called "The Mummy Group" where she could get suggestions and recommendations from other mothers: "*In that sense, it helps us during emergency circumstances where we don't have anywhere else to go so we have that outlet and venue available.*"

Scare Factor & Disregard for SOPs

When COVID cases were discovered in Karachi, Sarah mentioned that she did not take this very seriously: "So when it was found in Pakistan, I think initially for a month or so we also did not take this very seriously." Her newborn was diagnosed with clubfoot and she had to take him to the hospital for treatment, but she avoided frequently taking him during the lockdown because she did not want to expose him to the virus:

> "*the child would face a lot of exposure if we took him to the hospital and then exposed him to the doctors and people... so in the lockdown initially we were not able to take him, I think for one or two months we did not take him to the hospital.*"

The new mothers who were availing these services during lockdown as well as after it was lifted, mentioned that they were anxious or scared when they had to visit the hospital. Zainab said that there was a scare factor as she still had to go to the hospital for appointments during lockdown. She expressed how she would not want to personally visit the hospital, but would have to since she did

not have an option. She mentioned how in the waiting room there would be a 1-meter gap, but she would try her best to avoid sitting there and just stand. She also said that she deliberately missed appointments because of this fear. This also affected Asma as she was concerned about the virus and felt unsafe when she was physically present at the hospital, to the extent that it had a physical effect on her because SOPs were not being followed. Zoha also felt the same way:

> *"But if I had to go and get my ultrasound done at the hospital then I myself would be a little reluctant, because what if there are COVID patients, and you know there is this scare factor when going to hospitals because I could get the virus from there."*

A common theme found in almost all of the interviews of new mothers and healthcare professionals was the public's disregard for Standard Operating Procedures (SOPs) to prevent the spread of COVID. Zoha felt that people were not following SOPs, especially once the lockdown was lifted and Asma reflected upon her shock at the fact that a lot of the SOPs were not being followed in August—people were wearing masks but there was no social distancing. She was not comfortable accessing these services at the hospital because SOPs were not appropriately followed. Dr. Hafsa also discusses the public's disregard for SOPs and feels that this is due to a lack of awareness:

> *"...people would try to evade and you know all these people are not very educated and because of the dearth of primary healthcare in our setting, we would receive many patients who would defy the rules and would just walk in and insist on being seen."*

Despite their hospital making separate waiting areas and putting up pictorial precautions in the local dialect as well as English, not everyone would abide by the rules.

High-Risk Pregnancies

One theme that emerged from the data was that of high-risk pregnancies. Dr. Hafsa and Dr. Alina mention that there was an increase in high-risk pregnancies during the lockdown. Dr. Alina explains that despite the fact that her hospital resumed out-patient clinics earlier than others, people tend to stay at home out of fright of contracting the virus:

> *"...but they were delaying their checkups both for newborns and children as well as for mothers and this did lead to some problems because a lot*

> *of high-risk pregnancies were neglected as the patients would just not come. They were too scared or they had blood pressure, for example, eclampsia or something during their pregnancy that wasn't monitored well."*

Dr. Hafsa also points out that the curve for high-risk patients increased tremendously:

> *"During the COVID season, we saw a surge in high-risk patients. Previously, we used to have a mix, like low-risk patients delivering at the hospital facility as well as the high-risk patients trying to seek treatment and management plans. But now, these low-risk patients delivered in the nearby clinics or at home..."*

She explains that the cases that could not be catered to by the local doctor or the dai (midwife), came to their hospital and therefore, this resulted in an increase in the hospital's rates of caesarian section deliveries.

Compromised Aspects of Maternal and Newborn Health Services

Healthcare professionals were asked about aspects of maternal and newborn health services that were compromised due to the COVID-19 pandemic. Dr. Hafsa mentioned that family planning and contraception services were definitely affected during as well as after lockdown, and there were also unsafe abortions:

> *"...people were not coming in and they thought they [the visits] are not very necessary, although with the lockdown imposed and with husbands, wives and everybody together, there were a lot of unplanned and unwanted pregnancies and people did not have access to safe abortion services. So a lot of criminal activities went along with it and we are delivering a lot of unplanned pregnancies now."*

Routine checkups were also affected during the pandemic. Sarah mentioned that routine checkups were highly affected by the lockdown for her newborn as she would not take him to the hospital frequently: *"Till now my newborn's weight and growth was only checked once after the lockdown, but other than that we would not frequently go for consultations* and regular checkups [during the pandemic]." Zainab was advised to check her weight and blood pressure at home. However, she mentioned that this did not make much of a difference for her but if her husband

husband had not been a doctor, then checking blood pressure would have been difficult. Zoha was going for her routine checkups and she mentioned that this monitoring cannot be done at home via online health clinics.

Dr. Alina explains that with the suspension of OPDs, maternal and newborn health services were greatly affected, including routine checkups:

> *"So, while they were closed, of course services were affected greatly...they need to come for their monthly or weekly checkup if they are at the end of their pregnancy. They have to get their vaccinations, they have to present their blood test (results), they need to be counselled, the fetus needs to be evaluated, and ultrasounds need to be done."*

Dr. Hafsa mentioned that routine checkups were affected tremendously, but their hospital planned accordingly, and Dr. Sadia mentioned that they were affected by approximately 50%. She also adds that during the lockdown antenatal appointments were compromised, as well as post maternal fetal care because they had to be discharged early.

Support Systems

During pregnancy, new mothers require extensive support and skills to ensure that their physical and mental well-being is in optimal condition, so that the baby does well too. Physiological and emotional health are factors that can influence the experience of childbirth. Patient-centered care, presence of a supportive companion, access to competent healthcare providers, and a safe child birth environment, all contribute to having a good childbirth experience (Dosani et al., 2020). With the COVID-19 outbreak, such support systems are usually unavailable due to SOPs, such as restrictions on visitors in healthcare facilities and following social distancing guidelines. Social distancing can have an impact on the psychological health of the mother as they are separated from their loved ones who are typically present to support them (Ali et al., 2020). All these factors can affect the mother's childbirth experience.

In Pakistan's context, the presence of a support system is very important. Dr. Hafsa explains how new mothers would bring their families along and considering

COVID protocols, it would be difficult to accommodate them: "*So ladies brought a mother-in-law and accompanying children, sometimes an accompanying aunt so if one patient had to be seen, we needed 5 seats for them and that really crowded our outpatients.*" Attendant policies were also revised during the pandemic, since most hospitals would only allow a maximum of one attendant with the patient. Dr. Alina mentioned how at the time of lockdown for admitted patients, including the laboring ones, only one attendant (the husband) would be allowed, and families were not given entry even as visitors. However, after the lockdown she said that this had gone back to multiple attendants and therefore, OPDs are now full and bustling. Zainab recounted that prior to the lockdown, only one attendant was allowed but after the lockdown was imposed, even her husband was not allowed. Furthermore, during delivery no visitors were allowed. Zoha said that when she took her husband with her for her ultrasound appointment during the lockdown, they did not let him come inside. She mentioned how this did not really affect her, but it did affect her husband.

Government of Pakistan's (GoP) Guidelines on Sexual, Reproductive and Maternal Health Services during COVID-19

The Government of Pakistan; Ministry of Health National Health Services, Regulations and Coordination released a document with guidelines on sexual, reproductive and maternal health services during COVID-19 on 07th July 2020. The guidelines are addressed to providers (i.e., hospitals and other health facilities), community health workers, healthcare staff, and new mothers. The document was created to set in place Standard Operating Procedures (SOPs) to prevent the spread of the COVID-19 virus to the relevant health workers and patients alike. The document acknowledges that Sexual, Reproductive and Maternal Health service delivery in Pakistan could be affected by the COVID-19 pandemic and the main message it conveys is that essential services related to Sexual, Reproductive and Maternal Health should not be stopped or disrupted. For this, the document provides guidelines and certain precautions that should be followed by those who provide these services.

The document lists guidelines for various sexual, reproductive and maternal health services during COVID-19. For the provision of routine sexual, reproductive and maternal health services, the document states they should not be affected by COVID-19. In this section, it discusses the way antenatal clinics, labor rooms—G/O operation theatre, post-natal clinics—mothers and newborns, family planning

clinics, comprehensive abortion care and post abortion care services, referral for specialized care, and community outreach services should operate during the COVID-19 pandemic. Guidelines for breast feeding and newborn care have also been laid out.

The document then discusses how pregnant women with suspected or confirmed COVID-19 should be cared for at hospitals where it says that every hospital must have a pre-designated isolated area and a specified area for emergency delivery and provide neonatal care for pregnant/postpartum women and newborns who could have or are diagnosed with COVID-19. The section also lists SOPs for general advice and patient flow, antenatal clinics, labor rooms, post-natal clinics (maternal and newborn), family planning and post abortion care clinics, breastfeeding and newborn care for suspected or confirmed cases of COVID-19 as well as guidelines for other auxiliary services.

The guidelines encourage the use of telemedicine for antenatal clinics, provided that there is no need for physical examinations or tests. It also states that family planning clinics should continue without any hindrance and that telemedicine should be used for this. It encourages the use of telemedicine for maternal and newborn postnatal clinics, and comprehensive abortion care and post abortion care services. The document has a section on general infection prevention measures under which service arrangements at health facility, guidelines for the healthcare staff, applying droplet precautions and applying contact precautions are discussed in detail. The document concludes by stating that it is important to ensure that sexual and reproductive health (SRH) needs are met while the health system confronts the COVID-19 pandemic. It says that the availability of all critical services and supplies of SRH must continue, including intrapartum care for all births, emergency obstetric and newborn care, post-abortion care, safe abortion care to the full extent of the law, contraception, clinical care for rape survivors, and prevention and treatment for HIV and other sexually transmitted infections.

Out of the healthcare professionals interviewed, Dr. Sadia mentioned that they were following the Federal Government/GoP National Institute of Health (NIH) guidelines. Dr. Hafsa said that her hospital had their own guidelines, but they were not very different from the NIH guidelines. She elaborates on how these guidelines favored the implementation of screening protocols, the establishment of telemedicine desks as well as doing only emergency and urgent cases. She also mentioned that they made separate areas for COVID indeterminate patients,

since OBGYN is a specialty which sees a lot of emergencies. Dr. Alina was unsure regarding which guidelines (Federal or Sindh) were being used in her hospital, however, she explains that when the lockdown started outpatient clinics were suspended for a short time and only one attendant, the husband, was allowed. For COVID positive mothers who were ready for delivery or C-sections, they would be put at the end of the day's surgery list and UV light would be put in the OT for a few hours post-procedure. The mother and the baby would be shifted to an isolation ward both before and after the procedure. Dr. Sadia said that her hospital is following the Federal Government (NIH) guidelines. Therefore, as evident, most of the healthcare professionals' hospitals were using the GoP/NIH guidelines or similar guidelines.

Limitations

The study uses a qualitative exploratory research design. Perhaps a study of a larger scale could also make use of quantitative research methods to analyze and triangulate findings, bringing forth new dimensions of studying the subject. Furthermore, all of the new mothers come from an urban background and were availing these services at private hospitals. Therefore, the rural setting was not covered by this study. The healthcare professionals came from both, private and public hospitals. However, a comprehensive picture of public hospitals and their services could not be obtained as no participant within the new mothers sample had availed maternal and newborn health services from a public healthcare setup.

Conclusion

This study uses a qualitative exploratory research design, therefore, the findings may lead to further questions which could be studied in depth. New mothers, who were participants of my research, were able to access maternal and newborn healthcare during COVID-19 in Karachi. However, they did face some difficulty in the process. Online health clinics proved to be useful who used them, however, there was a general preference for in-person visits. Moreover, there is only a certain extent to which helplines and online health clinics can be serviceable, otherwise patients have to visit hospitals for purposes such as ultrasound, antenatal appointments, and other physical examinations.

Brazil's Ministry of Health authorized particular forms of telemedicine for the provision of care during the COVID-19 pandemic and developed a legal framework for its use (The Library of Congress, 2020). The country also has a non-profit service called "Fale com a parteira" (Talk to the Midwife) which connects pregnant women and healthcare professionals via Whatsapp (Benova et al., 2020). Although there are organizations in Sindh that offer telehealth and online clinic services, there is a need to develop a legal framework for service delivery to address issues on ethics and patient confidentiality in Pakistan. This will help improve the experience of service providers and consumers alike. In Nairobi, the "Wheels for Life" project was started by Dr. Jemimah Kariuki for pregnancy-related medical emergencies at night during curfew hours, which were imposed by the Government of Kenya because of COVID (Benova et al., 2020, KHF, n.d. & Mersie, 2020). A team of organizations run this program and it ensures that pregnant women are able to call on a toll-free number to talk to a doctor and if required, get free emergency transport to a suitable health facility to deliver safely (KHF, n.d.). This kind of initiative addressed the mobility restrictions created by the curfew. Mobility was not a major concern for the new mothers who were interviewed for this study and were availing private services, however, such an initiative could have been useful for new mothers from a lower-income background who were availing public services during the lockdown in Karachi.

For helplines and online health clinics to be successful, required infrastructure needs to be made readily available, especially good internet services. Awareness campaign for such initiatives is necessary to educate the population on how to use such services. Hospital administrations should strategize to make these helplines and online health clinics as effective as possible. A mix of these facilities as well as in-person visits (when required) should be used so that patients avoid making unnecessary visits to the hospital. Furthermore, healthcare professionals will need to adapt to the new normal of extending health services through such initiatives. Expanding upon the findings of this research and conducting further inquiry into the area of maternal facilities can help answer other questions highlighted within this paper. Namely, how access to maternal and newborn healthcare has been affected in the rural settings, and to what extent the absence of a support system during a pandemic affects the mental health of new mothers.

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