


The Potential Impact of COVID-19 Pandemic on the Antenatal Care as Perceived by Non-COVID-19 Pregnant Women: Women's Experience Research Brief

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Abstract

We aimed to study the impact of Coronavirus disease 2019 (COVID-19) pandemic on the basic antenatal care received during the. A facility-based descriptive cross-sectional study was conducted and 62 pregnant women were interviewed. A total of 80.6% of mothers were satisfied with the quality of antenatal care they received, ≥ 7 of 10 on visual analogue scales (VAS). The majority of women were not confident to deliver their baby and 58.1% of women showed ≤ 5 of 10 on VAS. Midwife (90.3%) was the commonest source of information. Internet (1.6%) was a poor source. The impact of the COVID-19 pandemic on the quality of antenatal care was significant, and the findings are useful for the policymakers to plan necessary actions.

Keywords

COVID-19, antenatal care, patient satisfaction, patient expectation, medical decision making

Introduction

There are relatively a few studies on maternal perception and their adaptive responses for preventive strategies of previous infectious epidemics. Lack of information has been found as a major drawback (1). Improved social support they experienced might have buffered the stress associated with a disease outbreak (2). A higher level of education was associated with willingness to comply with health policies and recommendations (3). There is a dearth of literature regarding the effect of the pandemic on the care of non-coronavirus disease 2019 (COVID-19) pregnant women at present.

Sri Lanka is a role model for maternity care among low- and middle- income countries (LMIC) countries with exemplary achievements (4). When compared with high-income countries, the maternal mortality rate (MMR) for Sri Lanka is impressive. The percentage of Sri Lankan mothers receiving the care of skilled birth attendance at delivery is over 99.5%, and the percentage of institutional deliveries is over 99% with 85% occurring in a facility that has the services of a specialist obstetrician (4). Therefore, the impact of this new pandemic on antenatal care seems to be a timely effort to evaluate. We assessed the impact of the COVID-19 pandemic on the quality of antenatal care as experienced by pregnant women admitted to a tertiary care maternity hospital in Sri Lanka.

Method

A facility-based descriptive cross-sectional study was carried out at antenatal wards in Castle Street Hospital for Women (CSHW), Colombo, Sri Lanka. A conveniently recruited sample of pregnant women admitted to antenatal wards for various obstetric reasons was interviewed during the peak (April 2020) of the COVID-19 pandemic in Sri Lanka. Women with suspected or confirmed COVID-19 cases were excluded.

The study instrument was an interviewer-administered questionnaire prepared to assess the impact on their life and state of antenatal care received with an overall idea about the health care strategies implemented in response to the outbreak. It consisted of 3 sections, section 1 assessed demographic and clinical details, section 2 assessed the impact on the woman's general well-being and basic antenatal care using 5 questions as

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Table 1. Demographic and Clinical Characteristics of the Study Participants.

Demographic characteristics	Median (IQR)
Age (in years)	29 (25.8-34.3)
Parity	2 (1-2)
Monthly family income (in LKR)	30 000 (20 000-60 000)
Gestational age (in weeks)	38 (32-40)
Demographic characteristics	n (%)
Occupation	
– Employed	15 (24.2)
– Unemployed	47 (75.8)
Educational level	
– No formal education	5 (8.1)
– G.C.E. Ordinary Level passed	27 (43.5)
– G.C.E. Advanced Level passed	25 (40.3)
– University degree or above	5 (8.1)
Clinical characteristics	n (%)
Pregnancy complications	
– Uncomplicated	35 (56.5)
– Hypertensive disease	8 (12.9)
– Gestational diabetes	15 (24.2)
– Heart diseases	2 (3.2)
– Small for gestational age	1 (1.6)
– Any other	1 (1.6)
Past medical comorbidities	
– None	55 (88.7)
– Hypertensive disease	3 (4.8)
– Gestational diabetes	2 (3.2)
– Renal disease	1 (1.6)
– Any other	1 (1.6)
Current medications	
– Routine iron and vitamin supplements	50 (80.6)
– Insulin/Metformin	12 (19.3)
– Antihypertensives	8 (12.9)
At least any antenatal care service missed due to this COVID-19 epidemic	43 (69.3)

Abbreviation: COVID-19, Coronavirus disease 2019.

mentioned in Table 1. Section 3 had two 1-10 visual analogue scales (VAS) to study the overall quality of antenatal care received during this period and how confident they felt to deliver their child under these circumstances. There was an open-ended question to inquire about sources of health information related to pregnancy during this period. Ethical approval was obtained from the Ethical Review Committee, CSHW, Colombo, Sri Lanka.

Results

A total of 62 antenatal mothers were studied. Table 2 demonstrates the basic demographic and clinical details of the study participants. The majority (35/62, 56.5%) had an uncomplicated antenatal period and all of them were in their third trimester (32-40 weeks). Table 1 summarizes the impact on the basic antenatal care during the COVID-19 pandemic

Table 2. Impact on the Basic Antenatal Care During the COVID-19 Pandemic Among the Participant Pregnant Women.

Question assessing the impact on basic antenatal care	n (%)
1. Ability to take nutritious food during this epidemic as usual	56 (90.3%)
2. Found it difficult to travel for clinics	15 (24.2%)
3. Ability to get essential vitamins and/or medications	58 (93.5%)
4. Had inadequate prenatal care during this period	15 (24.2%)
5. Missing any necessary blood investigations during this period	8 (12.9%)
Assessment using the VAS 1-10	Median (IQR)
Opinion on the quality of antenatal care received during this period as assessed with VAS	8 (7-9.25)
Opinion on how confident to deliver their child under these circumstances as assessed with VAS	5 (3-7)

Abbreviations: COVID-19, Coronavirus disease 2019; VAS, visual analogue scales.

among the participants. Effects on blood pressure monitoring (n = 3, 4.8%), growth scans (n = 6, 9.7%), and blood glucose testing (n = 3, 4.8%) were minimal; 29 (46.8%) women had missed their routine antenatal clinic visits. Majority (80.6%) were satisfied ($\geq 7/10$ on VAS) with the overall quality of antenatal care they received. Majority of women were not confident to deliver their baby during this period, and 58.1% of women showed $\leq 5/10$ on VAS. There was a statistically significant difference of being satisfied with the antenatal care they received, but not being confident to give birth during this pandemic ($P < .01$).

However, they were getting the necessary health information related to pregnancy from various sources. In particular, public health midwife was the most popular source (n = 56, 90.3%). Others were doctors (n = 14, 22.6%), nurses (n = 22, 35.5%), and only 1 woman (1.6%) had sought information through internet.

Discussion

This study provides information about the impact of the COVID-19 pandemic on the quality of routine antenatal care received by non-COVID-19 infected pregnant women. The impact of the COVID-19 pandemic on the quality of routine antenatal care received by the non-COVID-19 pregnant women was significant. Most of the mothers were less confident to deliver their child under these circumstances. Previous respiratory epidemics also resulted in major changes and new recommendations in the antepartum, intrapartum, and postpartum care of women (1). Therefore, studies in this regard are important in the present context. The present study gives some important parameters related to women's experience.

Accordingly, 69.3% had missed at least one antenatal care service and 24.2% had experienced traveling difficulties to seek health care during the lockdown. Inadequate

antenatal care during the lockdown was reported as 24.2%. These findings are important in planning actions amid of mitigation measures during future pandemic situations. Most of the current practice guidelines and protocols have been modified trying to address this gap. Promotion of domiciliary care with protective measures has been introduced while restricting hospital or field clinic visits only for the high-risk pregnant women (5–7). Follow-up studies on this regard might demonstrate the impact of such changes and interventions.

Several recent studies have shown that the COVID-19 pandemic has aggravated perinatal anxiety and depressive symptoms among pregnant women worldwide (8–11). These studies have elaborated the need for additional psychological screening for antenatal women. Our mothers were less confident to give birth during this period (median on VAS-5/10). Tadesse et al have reported that only 29.3% have utilized antenatal care completely during the pandemic in Ethiopia (12). However, a retrospective study assessing maternal and neonatal outcomes during the peak and following the pandemic in Ireland have shown no significant negative impact (13). The same cannot be expected from the low- and middle-income countries, and additional measures including promotion of domiciliary care need to be properly implemented.

However, the majority of women in the present study felt to have received a satisfactory antenatal care (VAS-8/10) during this period. With regard to the sources of health-related information for pregnant women, public health midwife was a prominent source (90.3%) and needs to be strengthened further. Others were comparatively less, possibly due to country lockdown and this strengthens feasibility of domiciliary care whenever it is essential. United Nations Population Fund COVID-19 Technical Brief for Antenatal Care Services has formulated a protocol for antenatal care combining telehealth facilities (phone or video chat) to ensure that there is no disruption in service or breakdown in women's maternity care (14). In this study, the use of internet was poor (1.6%) as a potential source of information. A study assessing the use of the internet for health information seeking among a cohort of outpatient clinic attendees in Sri Lanka has shown a similar figure (1.4%) in 2009 (15). Therefore, the internet and telehealth as a potential sources of giving health information can be further strengthened. A protocol-based approach with protective measures has been described and guidelines have been modified to adapt to this situation (7,16). The impact of these modifications on the maternal and neonatal parameters needs to be assessed regularly during the pandemic to make necessary changes. There is a dearth of literature on antenatal care during the COVID-19 pandemic and the present work becomes one of the preliminary studies.

Limitations

Being a single-center study with a small sample size carries a possible selection bias and lack of generalizability as limitations. The value of a control group is important, and it was

not possible to get a control group for this study as this pandemic was unpredicted.

Authors' Note

Author MP participated in conception, design, data collection, analysis, and writing/editing. Author MMG participated in data collection and analysis. Author AJ participated in conception and editing. All authors critically revised and edited the manuscript and approved the final submitted version.

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