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Effect of the COVID-19 Pandemic on Antenatal Care Behavior of Pregnant Women in Burdur, Turkey

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ABSTRACT

Objectives: Antenatal care (ANC) is the follow-up of pregnant women at regular intervals by healthcare personnel to protect and improve their own and their babies' health. This study aimed to reveal the effect of the COVID 19 pandemic on pregnant women's behavior receiving ANC in Burdur.

Methods: The sample of this cross-sectional study consisted of 538 pregnant women who were registered in the Family Medicine Information System in Burdur and required prenatal care on 15 May-15 June 2020. The accessibility rate in the study was 515 (95.7%) for 538 pregnant women called by phone.

Results: In terms of prenatal care, 14 (2.7%) and 69 (13.4%) of the pregnant women received ANC services from primary and secondary healthcare institutions, respectively, whereas 410 (79.6%) received ANC services from both institutions. In this study, 82 (81.2%) of the pregnant women who did not receive ANC could not attend the family doctor or gynecologist/obstetrician appointment for ANC due to fear of COVID-19 transmission.

Conclusion: The study found a decrease in the utilization of ANC services in Burdur, mainly associated with the COVID-19 pandemic. Initially, many arrangements were made to ensure that safety is prioritized in the implementation of ANC services. However, ANC services should be modified in line with the recommendations of the World Health Organization.

Keywords: Antenatal care, COVID-19, pregnancy

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INTRODUCTION

Antenatal care (ANC) pertains to follow-up conducted by healthcare personnel on pregnant women at regular intervals to protect and improve maternal and neonatal health.[1] It is accepted as an essential primary preventive healthcare service necessary for reducing maternal and neonatal mortality and morbidity. Programs worldwide facilitate access to quality health services for women undergoing the prenatal, birth, and postpartum periods.[2] From 1990 to 2013, the prenatal care rate in developing and developed countries increases from 27.7% to 48.1% and 76.4% to 84.8%, respectively. Moreover, previous studies report global maternal death rates of 341 and 211 per 100.000 in the years 2000 and 2017, respectively.[1]

In Turkey, ANC services are conducted in line with the "*ANC Management Guide*" issued in 2008.[3] According to the guideline, each pregnant woman should receive follow-up consultation at least four times. The first follow-up is expected during the first 14 weeks of pregnancy. The rate of pregnant women receiving the prescribed number of prenatal care consultations is 55% in 2008, which increased to 88.9% in 2013.[4,5] Between 2000 and 2017, the maternal mortality rate decreased from 42 to 17 per 100.000 in Turkey, revealing the importance of prenatal care.[1]

After examining similar field studies in Turkey, the study found that 99.4% of pregnant women in Karabuk in 2011, 98.7% in Istanbul, and all pregnant women in Bursa in 2013 received ANC at least once.[6-8] In Burdur, the rate of pregnant women not receiving ANC in 2009 was 0.4%.[9] Despite the improvement, deficiencies in primary health services during epidemics, such as SARS, MERS-CoV and Ebola, are well known to continue.[10] In the Ebola epidemic in West Africa between 2013 and 2016, studies reported that the use of modern methods for antenatal/postnatal care services and family planning decreased significantly.[11] These data suggest that similar disruptions in ANC services may also occur during the COVID-19 pandemic. However, studies conducted in Turkey on this topic are lacking.

This study aimed to determine the effect of the COVID-19 pandemic on the behavior of pregnant women toward receiving ANC in Burdur, Turkey.

METHOD

Burdur has a population of 259.590 with 91 registered family physicians as of May 2020. The study was cross-sectional and the population of the study consisted of 538 pregnant women who were registered in the Family Medicine Information System in Burdur and required prenatal care on 15 May-15 June 2020. Data were collected from June 15 to June 30, 2020, using a questionnaire prepared by the researchers after scanning the literature. The form includes sociodemographics, such as age, level of education, employment status in an income-generating job, place of residence, the existence of health insurance, age of spouse, level of education of spouse, and pregnancy-related questions, such as a week of gestation, the number of pregnancy, whether the pregnant woman went to follow-up and reasons for follow-up. Midwives/nurses working in the Central Public Health Center in Burdur contacted all pregnant women by phone and invited them to fill out the questionnaire. Two attempts were made to contact the pregnant women if they missed the call or were unavailable to answer. The accessibility rate in the study was 515 (95.7%) for 538 pregnant women called by phone. Since all pregnant women in the Family Medicine Information System were included, the recommended sample size was not calculated in the study.

Data were analyzed using SPSS 21.0. The frequency, percentage, mean and standard deviation were used in descriptive statistical methods.

RESULTS

A total of 515 pregnant women participated in the study. The mean of age was 28.1±5.0 years and the mean age of spouses was 29.9±5.6 years. Sociodemographic information of pregnant women are summarized in Table 1.

Table 1. Sociodemographic information of pregnant women

	n (%)
Age groups of pregnant women	
18–24 years	131 (25.4)
25–29 years	185 (35.9)
30–34 years	137 (26.6)
>35 years	62 (12.1)
Level education of pregnant women	
Elementary school	124 (24.1)
High school	161 (31.3)
University	230 (44.6)
Age groups of spouses	
18–24 years	127 (24.7)
25–29 years	115 (22.3)
30–34 years	164 (31.8)
>35 years	109 (21.2)
Level education of spouses	
Elementary school	170 (33.0)
High school	130 (25.2)
University	215 (41.8)
Place of residence	
City center	235 (45.6)
District	241 (46.8)
Village	39 (7.6)
Working status	
Never worked	90 (17.5)
Actively working	121 (23.5)
On leave due to pregnancy	304 (59.0)
Income level	
High	154 (29.9)
Middle	277 (53.8)
Low	84 (16.3)
Health insurance	
Yes	485 (94.2)
No	30 (5.8)

A total of 162 (31.5%) of the women are primiparous, and 353 (68.5%) are multiparous. The earliest and latest stages of pregnancy recorded were 10 and 41 weeks, respectively, with an mean pregnancy period of 26.2±7.8 weeks. The frequency of pregnant women who did not receive ANC services was 22 (4.3%). The utilization of ANC services is summarized in Table 2.

DISCUSSION

ANC is an essential primary preventive health service to reduce maternal and neonatal mortality and morbidity rates.[12] However, concerns about the utilization of health ser-

Table 2. The utilization of antenatal care services

	n (%)
Health institution where healthcare is received (n=515)	
Not receiving prenatal care	22 (4.3)
Family health centers only	14 (2.7)
Public hospitals only	69 (13.4)
Family health centers and public hospitals	410 (79.6)
Reasons for delaying healthcare* (n=101)	
Fear of COVID-19 transmission	82 (81.2)
Lack of access to healthcare	19 (18.8)

*Among those not receiving prenatal care from family health centers or public hospitals.

vices are increasing due to the worldwide fear of COVID-19. This situation causes disruptions in ANC. According to data from the United Nations International Children's Emergency Fund (UNICEF), nearly half of countries worldwide experience problems in using ANC services.

In the present study, 4.3% of pregnant women who require prenatal care did not register with any health institution. According to data from the Ministry of Health Decision Support System, the rates of pregnant women in Burdur who received ANC services in May and June 2019 were 99.85% and 99.70%, respectively.[13] The results indicate that the rate of pregnant women receiving ANC services decreased during the COVID-19 outbreak in Burdur. Similarly, difficulties were experienced in accessing prenatal care during the Ebola epidemic of 2014–2015.[14,15] In the early stages of the Ebola epidemic in Sierra Leone, the rates of in-hospital deliveries decreased by 21%, whereas it increased to 28% during the later stages of the epidemic. Difficulties in accessing healthcare, especially in public hospitals and private non-profit clinics, indicated that inequality in prenatal and obstetric care is more severe during the Ebola epidemic.[15] In Liberia, 46% of the urban population experienced difficulties accessing healthcare services, whereas 67% of the rural population could not benefit from healthcare services. Women who wanted to receive prenatal/ANC constituted the most significant part of the 20%–50% decrease in application rates in hospitals. Therefore, a 10% increase was observed in traditional birth habits during the Ebola epidemic.[16]

Similarly, an evaluation of the data of two health centers in Liberia 9%–14% decrease in the use of prenatal services.[14] In this case, maternal and neonatal morbidity and mortality rates are of great importance when considering West Africa. Problems experienced with ANC services brought more severe problems than Ebola.[17,18] In light of this information, UNICEF grew concerned about severe increases in health inequality and maternal/neonatal deaths during the COVID-19 pandemic.[19] The World Health Organization (WHO) and UNICEF made recommendations for health system interventions according to the specific needs of countries.[20] The current study results provide evidence that Burdur requires new strategies for the continuation of ANC services.

The study found that pregnant women did not receive ANC largely due to fear of COVID-19 transmission. Similarly, during the Ebola epidemic, the fear of transmission within health centers has been the most critical barrier to receiving ANC services. In addition to the closure of health centers, the refusal to care for patients outside of Ebola has decreased access to ANC services.[16] Given the current epidemic, Burdur initiated studies on COVID-19 awareness since the WHO declared COVID-19 a pandemic. The researchers informed health protocols to prevent any disruption in primary healthcare services to all healthcare personnel. Also, the local government issued strategies that considered the safety of pregnant women and babies as they benefit from preventive health services. A psychosocial support line was established in the provincial health directorate. Moreover, psychologists conducted follow-up via phone calls to reduce the fear and anxiety associated with COVID-19. Despite the communication with psychologists, the pregnant women continued to refrain from visiting health institutions due to the fear of COVID-19 transmission, which indicates that the issue requires a detailed evaluation.

CONCLUSION

The study found a decrease in the utilization of ANC services in Burdur, mainly associated with the COVID-19 pandemic. Initially, many arrangements were made to ensure that safety is prioritized in the implementation of ANC services. However, ANC services should be modified in line with the recommendations of the UNICEF and WHO.[20] The result suggested that pregnant women did not receive ANC due to fear of COVID-19 transmission and that this concern is more significant than initially expected. The effects of spouses on the process are understandable. Therefore, the necessary personnel planning should be done, and psychosocial support should also be provided to spouses. Lastly, new regulations are required to enable pregnant women to utilize safe and good quality ANC services.

Disclosures

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

Ethics Committee Approval: Ethics committee approval of the study was obtained from Akdeniz University Non-Invasive Ethics Committee (Approval date: Jan 27, 2021 and Approval number: KAEK-78) and official permission was obtained from Burdur Provincial Health Directorate. Also, verbal consent was obtained from the all participants.

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