

Knowledge, Attitude, and Practices of Pregnant Women Towards Antenatal Care in Tertiary Care Hospital Somalia: A Prospective Study

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Abstract Introduction: All women, regardless of their pregnancies, deserve high-quality maternal services during pregnancy, delivery, and afterward. This study aims to evaluate the knowledge and attitude of pregnant women toward antenatal care. **Materials and Methods:** A prospective study was carried out among pregnant women attending at obstetrics outpatient department of Mogadishu Somali Turkish Training and Research Hospital. The sample was obtained using random sampling methods. In addition, information was gathered using a structured interview schedule between August and October 2022. **Results:** The majority (63.3%) of respondents were aged between 20 and 24, while 21% were between the ages of 25 and 29, and 8% were between the ages of 30 and 34. One hundred sixty-five pregnant women had primary school education, 31% had secondary education, 15% had a university education, and 11% were illiterate. Only 252 (63.3%) correctly identified the first prenatal check-up within three months. **Conclusion:** According to the findings, most of the study's participants had a high level of knowledge and good practices, and most had a favorable opinion about ANC. The Federal Ministry of Health's public health department should strengthen national health education programs to promote antenatal care.

Keywords Antenatal care; Health care; Prenatal care; Somalia.

Introduction

Antenatal care (ANC) is one strategy to reduce maternal mortality, which makes it easier to identify and manage risk factors early in pregnancy. The timely and frequent use of a package ANC enables the provision of essential services, such as the detection and treatment of infections and the detection and treatment of obstetric complications like preeclampsia (1).

Antenatal care is a time to encourage healthy behaviors, including breastfeeding, early postnatal care, and planning for the best pregnancy spacing, as well as the utilization of competent attendance at delivery (2).

Prenatal care is an important safety net for good parenting and childbirth, where the potential mother and her fetus's health may be monitored. The care a woman receives to protect the health of both the mother and the unborn child is known as ANC. Prenatal care is a clinically valuable and affordable safety net for healthy parenting, including antenatal care, a successful strategy to reduce adverse perinatal outcomes such as preterm birth, intrauterine growth restriction, and low birth weight (3).

More than 200 million women become pregnant each year around the globe. In many underdeveloped nations, complications during pregnancy or delivery account for 25–33% of all fatalities of reproductive age. Nearly 90% of these fatalities occur in Asia and Sub-Saharan Africa, with 10% in other developing nations and fewer than 1% in other parts of the world (4).

A healthy pregnancy diet and lifestyle are crucial for the growth of a healthy baby and may improve the child's health in the long run. Unfortunately, nearly 90% of maternal deaths occur in underdeveloped nations, and more than 500,000 women pass away every year from conditions connected to pregnancy and delivery in these countries (5). The extraordinarily high figures in developing countries have been linked to the latter's use of outdated obstetric services, so maternal and infant morbidity and death rates in developed countries have been

reported to be much lower. Studies in developing nations have revealed that the availability, quality, and cost of services, as well as the social structure, health attitudes, and individual characteristics of consumers, all influence the use of healthcare services. In addition to other socioeconomic variables, inadequate prenatal and other health service access and usage continue to contribute to the high maternal death rate (6).

To ensure their health and the well-being of their babies in the womb, all women, whether or not their pregnancies are complicated, need high-quality maternal services throughout pregnancy, delivery, and the postpartum period. The women in need must have access to high-quality maternal health care that is inexpensive, efficient, suitable, and acceptable. Approximately 63% of pregnant women are in Africa, 65% of pregnant women in Asia, and 73% of pregnant women in Latin America. Contrarily, in developed nations, maternal healthcare is almost universal (7)

This study identifies or evaluates the knowledge and attitude toward antenatal care. Women are allowed to determine when to visit for antenatal care and what to do at each stage of pregnancy (8).

Materials and Methods

A prospective study was conducted among pregnant women attending the obstetrics outpatient department at Somalia Turkiye Training and Research Hospital. The sample was obtained using random sampling methods. Information was gathered using a structured interview schedule between August and October 2022. Questions about socioeconomic factors, mother antenatal knowledge, and attitude toward attending prenatal clinics were included. Data collected from the women were analyzed using SPSS version 22. The variables were measured with the respondents' knowledge, measured with a three-Likert scale with the options: "correct", "incorrect", and "I do not know". The respondents' attitudes were measured with a two-Likert scale, with the options including agree and disagree.

The data were analyzed using descriptive statistical analysis such as frequency counts and percentages.

Each response received a score: 2 for the correct and 0 for the incorrect or "I do not know" answer. A percentage was calculated from each participant's total score.

Those who obtained a score of greater than 96% were considered "knowledgeable" (a high level of knowledge). Those between 60 and 90 percent were assessed to have an average degree of knowledge, while those with less than 40 percent were considered "unknowledgeable" (a low level of knowledge). The questionnaire also collected information on the women's sources of ANC knowledge.

The maximum score was 95, and the lowest score was 18. Therefore, these numbers represent the range of possible scores. The percentage of attitude was determined as follows: those with scores greater than 95% were classified as having a "positive attitude," and those with scores below 40% were classified as having a "negative attitude."

Results

The majority of respondents, 252 (63.3%) aged 25 to 29, while 84 (21%) were between the ages of 25 and 29, and 32 (8%) were aged 30 and 34.

One hundred sixty-five pregnant women had primary school education, 31% had secondary education, 15% had a university education, and 11% were illiterate. However, the second to fourth deliveries was 195 (55%).

Most of the respondents (222, 55.5%) had one abortion, while 120 (30.0%) women had no prior history of abortion, and only 58 (14.4%) had two or more. One hundred and 86 (53%) of all respondents gave birth in hospitals. One hundred eight women gave birth at home; in contrast, only 56 (22.9%) had previously given birth in private clinics (Table 1).

Table 1. Socio-demographic characteristics of pregnancy

Variable	Frequency	Percent
Age		
<20	9	23%
20-24	252	63%
25-29	84	21%
30-34	32	8%
>35	23	5%
Education		
Illiterate	45	11%
Primary school	165	41%
Secondary school	130	32%
University	60	15%
Occupation		
Labor worker	80	20%
Non-labor worker	320	80%
Location		
Urban	355	88%
Rural	45	11%
Parity		
1	95	27%
2-4	195	55%
5-7	50	14%
>8	30	2.9%
Normal previous delivery		
N of vaginal delivery	252	72%
Caesarean section	98	28%
Place of delivery		
Public hospital	56	16%
Private	186	53%
Home	108	30%

Abortion		
0	120	30%
1	222	55.5%
2-4	58	14.4%
Annual income		
50-100	62	15.5%
101-300	178	44.5%
301-500	120	30%
501-900	40	10%

Table 2. Distribution of expectant mothers according to their knowledge of antenatal care

	Correct (%)	Incorrect (%)	I do not know (%)
Does the first prenatal check-up have to be performed during the first three months?	252 (63%)	120 (30%)	28 (7%)
The newborn needs exclusive breastfeeding for the first six months.	168 (42%)	178 (44%)	54 (13%)
Is daily fetal movement counting necessary during the last three months' stages of pregnancy?	360 (90%)	20 (5%)	20 (5%)
Does taking more food with vegetables during pregnancy help prevent anemia?	385 (96.3%)	9 (1.5%)	6 (1.3%)
Does a pregnant woman require a vitamin supplements?	208 (52%)	152 (38%)	40 (10%)
Is medication intake without a physician's prescription safe for the fetus?	38 (9.5%)	340(65.5%)	22 (4.2%)
Do pregnant women need dental care?	160 (40%)	180 (456%)	60 (15%)

Does a pregnant woman require any vaccinations?	252 (63%)	48 (12%)	100 (48%)
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Most individuals responded correctly when asked whether having a daily fetal movement count during the last three months of pregnancy was necessary.

They also had an excellent understanding of maternal vaccination; 256 (95.8%) knew the importance of vaccination, while 48 (12%) did not.

Three hundred and 85 (96.5%) knew they should eat more vegetables during pregnancy to help prevent anemia; only 252 (63.3%) could accurately determine that the first prenatal check-up had to be performed during the first three months (Table 2).

According to the findings of general attitudes toward the program, most pregnant women (96.0%) demonstrated a good attitude toward ANC. Our participants needed to attend antenatal care. Regarding mothers taking vaccination, only 18 (4%) agreed, while 382 (9%) disagreed. They were aware, as acknowledged, but some of them did not take the vaccination.

Three hundred and 70 (92.5%) of the participants were aware of the effects of smoking, while 30 (7.5%) had no idea of the detrimental effects of smoking on their fetuses (Table 3).

In addition, 252 women aged 20–24 who had one to four or more antenatal care visits had a statistically significant higher knowledge score (89%), while 27 women (10.7%) did not attend antenatal care. Among 84 women aged 25-29 years, 71 (84%) went to antenatal care more than five times, whereas 55 mothers over 30 years (17%) were less likely to go to antenatal care ($p < 0.001$).

Table 3. Distribution of the expectant mothers according to their attitudes on prenatal care Attitudes

	Agree	Disagree
The pregnancy mother needs antenatal care.	320 (95%)	20 (5%)
Have you ever taken a vaccine during pregnancy?	18 (4%)	382 (95%)
I believe that the smoking of the pregnant mother affects the unborn child.	370 (92,5%)	30 (7.5%)
Is there any importance of routine screening tests for pregnancy	389 (97.3%)	11 (2.8%)
Does regular monitoring facilitate delivery?	18 (45 %)	220 (55%)
Are you going to the hospital when you know you are pregnant?	261 (65.3%)	139 (34.8%)
Does the pregnant mother need an ultrasound?	271 (67%)	129 (32.3%)

Ninety-five percent of women with one child attended antenatal care; 59 women (62%) attended antenatal care 1 to 4 times, while 36 women (37%) did not.

One hundred ninety-five women in the study had 2 to 4 children, 179 (91%) attended antenatal care one to four times, 16 (8.2%) attended antenatal care > 5 times, and 60 women (1.2%) had five or more children, were > 5 times less likely to attend ANC ($p<0.005$).

The majority of respondents had a history of one abortion-related significantly higher ANC. Two hundred twenty-two pregnant women attended ANC, with 154 (69%) attending previous pregnancies 1 to 4 times for antenatal care and 68 (30.6%) attending antenatal care. While the mother has a history of abortion two to four times, ANC (10.7%) has been less likely to attend antenatal care ($p<0.001$).

Forty-five of the women who came to ANC were illiterate. Forty-five (80%) had not attended ANC in their previous pregnancy, while nine women (20%) came 1 to 4 times to ANC;

compared to 130 pregnant women who attended primary school, 130 (100%) received ANC and only came ANC 1 to 4 times in the previous pregnancy. While 99 (60%) of the 165 pregnant women graduated from high school, 66 (40%) attended ANC more than five times. Of the other 60 pregnant women who graduated from university, 60 (100%) had good antenatal care visits ($p < 0.001$) (Table 4).

Table 4. Cross tabulate Antenatal Care for Pregnant Women of Different Demographics, Parity, and Socioeconomic

	0	1-4	>5	p-value
Age				
<20	9	0	0	p<0.001
20-24	27	225	0	
25-29	0	13	71	
30-34	0	0	32	
>35	0	0	13	
Parity				
1	36	59	0	p<0.005
2-4	0	179	16	
5-7	0	0	50	
>8	0	0	10	
Abortion				
0	36	84	0	p<0.001
1	0	154	68	
2-4	0	0	58	

Education				
Illiterate	36	9	0	p<0.001
primary school	0	139	0	
secondary school	0	99	66	
University	0	0	60	
Occupation				
Labor worker	36	44	0	
Non-labor worker	0	194	126	
Annual income				
50-100	36	26	0	p<0.001
101-300	0	178	0	
301-500	0	34	86	
501-900	0	0	40	

Discussion

A pregnant woman should get special care from her family and the community since pregnancy is a significant occurrence. In addition, other studies have shown the importance of knowledge and awareness among pregnant women as factors influencing the acceptability and utilization of health care (9). Similarly, having the correct information and attitude ensures that Somalian women continue receiving ANC.

The current study found that most pregnant women (95.3%) had good knowledge of ANC. Regarding immunization, the tetanus toxoid vaccine is beneficial in preventing the potentially fatal illness known as tetanus neonatorum. However, a neurotoxin may be produced due to tetanus infection and cause titanic muscular spasms. Therefore, the mother must get two tetanus shots during the first pregnancy and one additional dose for each subsequent pregnancy (10).

Our study also showed that they had an excellent understanding of maternal vaccination; 256 (95.8%) knew the importance of vaccination. Regarding mothers taking vaccination, only

18(4%) agreed, while 382(9%) disagreed. Two hundred twenty-two pregnant women came to ANC, 154 (69%) attended previous pregnancy 1 to 4 times, while 68 women with zero abortions attended > 5 times, While the mothers who had a history of three to five abortions attended only two to four times to ANC (10.7%) ($p < 0.001$).

The WHO also emphasized the importance of antenatal care (ANC) throughout pregnancy and recommended that women visit the antenatal clinic at least four times. These appointments would allow medical professionals to detect problems, such as anemia and chronic constipation, as early as possible. In addition, they will assist the mother in gaining the necessary knowledge about pregnancy, delivery, and puerperium (11).

Healthy eating is essential during pregnancy; maternal nutritional needs change to meet the demands of pregnancy. In addition, healthy eating can help ensure adequate nutrients are available for both the pregnant mother and the fetus; similarly, a study about nutritional practices for breastfeeding and pregnancy conducted in Guatemala shows that the baby's health will be improved by eating vegetables, grains, and milk throughout pregnancy. It should also be considered that sociocultural attitudes might impact maternal health, and different people have different eating habits and behaviors (12).

According to the findings of general attitudes toward the program, most pregnant women (96.0%) demonstrated a good attitude toward ANC. Of our participants, 320(95%) showed the importance of attending antenatal care.

Conclusion

According to the results, most of the study's participants had a high level of knowledge and good practices, and most had a favorable opinion of ANC. However, health education programs must be undertaken to raise women's knowledge of ANC in Somalia to achieve a high level of awareness.

Conflicts of interest

Authors have no financial or personal conflicts of interest.

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Ethical approval

Ethical approval was obtained from the ethical committee of Somalia Turkiye Training and Research Hospital. Written and informed consent was taken from the patient for participation.

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