



## Barriers to Utilization of Focused Antenatal Care Services Among Pregnant Women in Basrah Governorate

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### ABSTRACT

Along with family planning, skilled delivery services, and emergency obstetric care, FANC is a crucial component of a package of initiatives aimed at improving maternal and newborn well-being. The present study was conducted to identify demographic, as well as social and cultural factors that may contribute to a low utilization of Focused Antenatal Care (FANC) services in Basrah among pregnant and postnatal women. This research is a cross-sectional study to find out obstacles to the use of centered prenatal care services among pregnant women in the governorate of Basrah. 116 (34.6 %) were in the age group 21-25 year, the majority 147(43.9 %) of women had finished primary or intermediate school. Most of the women under study 318(94.9 %) were not employed. A high percentage of husbands (49%) had finished primary or intermediate school and (39.7%) of husbands had been governmental employees. 28.0% of the women under study had only one baby, most of the study population 290 (86.3%) had accepted socio economic status. The study identified a statistical significance between low utilization and parity, being too busy, living away from antenatal care services and cost of transportation, long waiting time, and also identified a statistical significance between knowledge, attitude of the participants and low utilization of focused antenatal care.

**Keywords:** focused antenatal care, knowledge, benefit, ANC utilization, quality of services, maternal mortality.

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### INTRODUCTION

In Basrah, Iraq's maternal, neonatal, and under-5 mortality rates stood at 31 per 100,000 live births, 13.6 per 1,000 live births, and 23.1 per 1,000 live births, respectively. The maternal mortality rate is 26.9 per 100,000 live births, the neonatal mortality rate is 16.9 per 1,000 live births, and the mortality rate for children under the age of five is 27.8 per 1,000 live births [1]. Percentage of First visit 64%, Percentage of Fourth visit and more 38%, 116 (34.6 %) were in the age group 21-25 year, the majority 147(43.9 %) of women had finished primary or intermediate school. Most of the women under study 318(94.9 %) were not employed.

A high percentage of husbands (49%) had finished primary or intermediate school and (39.7%) of husbands had been governmental employees. 28.0% of the women under study had only one baby, most of study population 290 (86.3%) had accepted socio economic status, post-natal visit 53% in Basrah, total abortion rate per (100) woman patient in the gynecological obstetric ward 13.5%.

"Ensure safe lives and encourage well-being for everyone at all ages," says Goal 3 of the Sustainable Development Goals (SDGs): "good health and well-being for people of all ages [2, 3]. By 2030, the global maternal mortality rate will be less than 70 per 100,000 live births, with all countries aiming to reduce neonatal mortality to at least 12 per 1,000 live births and to at least 25 per 1,000 live births below the age of five. Many of these harmful consequences can be avoided with proper healthcare during pregnancy and childbirth. Along with family planning, skilled delivery services, and emergency obstetric care, FANC is a crucial component of a package of initiatives aimed at improving maternal and newborn well-being [4].

Studies have linked poor pregnancy outcomes to low utilization of FANC, In the end, this leads to greater maternal and neonatal morbidity and mortality [5]. To improve maternal health, obstacles to quality maternal health services must be recognized and addressed at all levels of the health system [6].

Iraq has significantly improved the national health quality of services. Antenatal Care (ANC) and Postnatal Care (PNC) have the ability to lead to reducing the morbidity and mortality of mothers and infants, so

attempts are being made to emphasize different aspects of ANC and PNC care that are most likely to influence the outcome of pregnancy. It is necessary for pregnant women to receive high-quality prenatal and postnatal care [7, 8].

The previous model of WHO depends on four visits for ANC [9]. while the new WHO ANC model In order to minimize perinatal mortality and boost the experience of women in treatment, at least eight contacts are recommended [10].

The present study was conducted to identify demographic, as well as social and cultural factors that may contribute to a low utilization of Focused Antenatal Care (FANC) services in Basrah among pregnant and postnatal women.

## **MATERIAL AND METHODS**

The research was performed in the governorate of Basrah, which is the southernmost governorate in Iraq. It shares borders with Kuwait, Iran and Saudi Arabia. Vast desert plains and the Shatt al-Arab waterway flowing from Al-Qurnah through Basrah city and on to the Arab Gulf dominate the geographical landscape of the governorate. It has a total surface area of 19070 square meters, about 450 kilometer to the south from the capital Baghdad .It has a population of 2908491, women in reproductive age 683340 (23.4%) and pregnant women 100244(3.4%) 1n 2018.

The main health services are provided by the public sector, where all forms of curative and preventive services are provided by a large network of health facilities spread across the governorate. . There are 120 main primary health care centers which are managed by10 health districts in both urban and rural areas, providing antenatal care services free of fees.

The current study's data came from a number of sources 22 (19%) of primary health care centers were selected by stratified random sampling from these 10 health districts, these primary health care centers are :- AL-Seif and AL-Qibla from 1st health district, AL-Maqal and AL- Junainah from 2nd health district, AL-Khaleig and street 60 from 3rd health district , Abu AL- Khasseib and Hamdan from Abu AL- Khasseib health district , AL- Aqeel, AL-khatoah ,AL- haj khuthair ,AL-baten ,AL- Hassan al basry and safwan from AL-Zubair health district , Shat AL-Arab from Shatt AL-Arab health district , AL-Hartha from AL-Hartha health district , AL-Dair and AL-shafee from AL- Dair health district, AL-Qurna and AL-Sharsh from AL-Qurna health district , AL-Medainah and AL-Medainah typical center from AL-Medainah health district.

The reason for selecting these centers was that they serve a population of different socioeconomic classes so they may be representative of all other health centers in Basra city.

### **Study Subject**

The research period was from 2ndJanuary to end of September 2019, the study was done by 4 researchers. The interviewing doctors were qualified to administer the questionnaires. The study involved (335) pregnant women and women in postnatal period (their babies age less than 6 weeks) who had come to the 22 selected primary health care centers they were enrolled in the study for immunization of their children over 3 months period extending from 2nd of January to 31st of March, 2019. Accordingly 246 (73.4%) pregnant women and 89 (26.6%) women in the postnatal period were interviewed after consenting.

### **Study Design**

The study was a cross-sectional, descriptive study in which quantitative data was collected using questionnaires and a deductive approach.

For the purposes of the study prepared by the researchers, a special form of questionnaire was prepared. Included in the questionnaire are:

- 1- Sociodemographic data relating to the population of the sample.
- 2- Past obstetrical history.
- 3- Women's knowledge about FANC services.

All of these variables can lead to the low use of focused prenatal care.

Each health care center was visited prior to the proper phase of data collection. The health care center managers were briefed about the objective nature and requirement of the data collection process after which each center was visited twice to complete the data. The data were collected through direct interview of women who were qualified for the study by the researchers. Each interview took (15 - 20) minutes to be completed.

### **Sample Size**

The sample size was calculated using Kirsh and Leslie's formula.

### **Definition of Variables**

The variables used in this analysis were chosen to answer particular research objectives; the following is a general description of the types of variables on the questionnaire:

-Demographic, social and cultural variables of the respondents

-Low utilization; in this study, refers to the number of visits made at the initial Focused Antenatal Care (FANC) visit by pregnant women as well as the gestational age. Based on suggested World Health Organization (WHO) FANC visits .The number of visits was rated as either low or adequate. Low use, which was the study's outcome predictor, applied to less than four FANC visits during the pregnancy.

- Women's knowledge of the importance of FANC: Participants were asked about the number of ANC visits they had during their pregnancy, both when there was a problem and when there was no problem, as well as the sources of FANC care information.

**Ethical consideration:** The mothers who took part in the study gave their verbal consent.

**Data Analysis and Statistical Methods:**

Using SPSS statistical tools for Windows version 22, data was entered and analyzed. To generate output on all variables, Frequencies and cross tabulations were used in the descriptive statistics. The FANC's number of visits was classified as

In dichotomous variables, FANC visits < 4 indicate low or poor utilization and FANC visits > 4 indicate adequate or sufficient utilization. The identification of demographic and socio-cultural variables associated with low usage was done using cross tabulations. When the P value was less than 0.05, the relationship was considered significant.

**Ethical clearance:** This research project has been approved by the research committee of Basrah University. After approval, a formal letter was written to the respective study site then permission was obtained to conduct the study.

**RESULT**

This research included a total of 335 women: 116 (34.6 %) were in the age group 21 -25 years .The majority 147(43.9 %) of women had finished primary or intermediate school, 318(94.9%) were not employed. A high percentage of husbands (49%) had finished primary or intermediate school and (39.7%) of them had been governmental employees. [Table 1]

**Table 1: Characteristics of pregnant women and postnatal mothers (n=335) who participate in the study**

Characteristic	N (%)
<b>a-Age</b>	
≤ 15	7(2.1)
16 -20	87(26.0)
21-25	116(34.6)
26-30	67(20.0)
31-35	34(10.1)
36-40	24(7.2)
Total(335)	100.0
<b>b-Respondent Education</b>	
Illiterate.	47(14.0)
Just read and write	74(22.1)
Primary + intermediate school	147(43.9)
Secondary school	32(9.6)
Higher education	35(10.4)
Total	335(100.0%)
<b>c-Respondent occupation</b>	
Governmental	15(4.5%)
nongovernmental	2(0.6%)
not employed	318(94.9%)
Total	335(100.0)
<b>d-Husband education</b>	
Illiterate.	33(9.9)
Just read and write	59(17.6)
Primary + intermediate school	164(49)
Secondary school	32(9.5)
Higher education	47(14.0)
Total	335(100.0)
<b>e-Husband occupation</b>	
Governmental	133(39.7)
nongovernmental	98(29.3)
not employed	104(31)
Total	335(100.0%)

94(28.0%) had only one baby, Most of study population 290 (86.3%) had accepted socio economic status, also we noticed from the study that more than two third of the participant 235(69.9%) get their

information on Focused Antenatal Care( FANC) from their relatives, 53(15.8%) get their information from health worker, 6(1.85) from radio, 5(1.5) from traditional birth attendant and 37 (11%) from others (TV, neighbor, friends). Most of the women under study 197 (58.9%) knew that pregnant women must attend ANC services more than four visits when there is no problem and 227(67.8%) knew that pregnant women must attend ANC services more than four visits when there is a problem. The women under the study when they asked about the benefits of ANC, about 317 (94.6) of them agreed with receive preventive interventions such as Tetanus toxoid vaccine immunizations, Iron, 265(79.1) were agree with the point Assist the provider in providing individualized education, knowledge, and communication, 242(72.2%) were agreed with early detection of risk conditions associated with pregnancy , while 186 (55.5%) were agree with the point of Establishing rapport between pregnant mother and ANC provider. [Table 2]

**Table 2: Participating mothers' sources of information and knowledge on FANC**

a- Information sources		n ( percent )
worker in the medical field (health worker)		53(15.8)
Radio station		6(1.8)
Traditional Birth Attendants		5(1.5)
relative		235(69.9)
other		37(11)
b-Number of visits when there is no problem		
Less than 4 visits		85(25.3)
4 visits		53(15.8)
More than 4 visits		197(58.9)
c-Number of visits when there are problems		
Less than 4 visits		90(26.8)
4 visits		18(5.4)
More than 4 visits		227(67.8)
d-Benefits of FANC		
A	Establishing rapport	186(55.5)
B	Early detection of pregnancy associated risks	242(72.2)
C	Assist the provider in providing individualized education, knowledge, and communication.	265(79.1)
D	Reception of pregnancy related vaccines and supplements	317(94.6)

There were statistical significances between parity and low utilization of FANC, also between many socio-cultural factors with low utilization of FANC as being too buzzy, feeling healthy and not necessary to have antenatal care, pregnancy is ordinary issue, feeling embarrassed, living away from antenatal care services and the cost of transportation, long waiting time, while other factors showed no significant relation with low utilization of FANC as satisfaction, being accompanied by husband or being forced to conceive. [Table 3]

**Table 3: Low utilization of FANC is linked to socio-cultural factors**

variable	Less than 4 visits N (%)	Equal and more than4 visits N (%)	p value
Not satisfied	18(13.3)	11(8.4)	0.197
Too buzzy	57(42.2)	5(3.8)	0.001
Not necessary	10(7.4)	2(1.5)	0.21
Feel embarrassed	20(14.8)	5(3.8)	0.01
Live away from	18(13.3)	4(3.00)	0.01
Public transportation	12(8.9)	3(2.3)	0.02
Cost of transportation	11(8.1)	2(1.5)	0.02
Pregnancy is ordinary issue	10(7.4)	2(1.5)	0.02
Long waiting time	33(22.2)	4(3.00)	0.01
poor	2(1.5)	1(0.7)	0.7
Accompanied by husband	45(33.3)	50(38.2)	0.748
Forced to conceive	12(8.9)	15(11.5)	0.878

There was no statistical significance between bad Obstetric history with low utilization of FANC. [Table 4]

**Table 4: Obstetric history associated with low utilization of FANC**

variable	Less than 4 visits N (%)	Equal and more than 4 visits N (%)	p value
Dead child	9(6.7)	11(8.4)	0.512
abortion	28(20.7)	34(26.0)	0.315
Abortion no.			0.513
One	21(15.6)	21(16.0)	
More	7(5.1)	13(9.9)	
cs	31(23)	22(16.8)	0.208
Cs obstrelabour	22(16.3)	16(12.2)	0.191
Cs no.			0.249
One	32(17.0)	12(9.2)	
more	8(5.9)	10(7.0)	

There was statistical significance between knowledge and attitudes of participants with low utilization of FANC like the site of ANC, at which trimester they start ANC and if they had antenatal cards for the previous pregnancy.

In addition when they were asked about what they like most with antenatal services at the current facility most of them answered the good health worker attitude but with no statistical significance with low utilization of FANC. [Table 5]

**Table 5: Knowledge and attitudes of participants associated with low utilization of FANC**

variable	Less than 4 visits N (%)	Equal and more 4 visits N (%)	p value
ANC site			0.03
PHC	60(44.40)	79(60.30)	
Private	7(5.20)	4(3.10)	
Both	68(50.40)	48(36.60)	
ANC provider			0.666
Doctor	93(68.90)	95(72.50)	
Medical assistant	11(8.10)	12(9.200)	
Both	31(22.90)	25(17.30)	
Which trimester			0.001
1 <sup>st</sup>	21(15.60)	49(37.40)	
2 <sup>nd</sup>	105(77.80)	80(61.10)	
3 <sup>rd</sup>	9(6.70)	2(1.50)	
Antenatal card	111(82.20)	121(92.4)	0.31
Most like about FANC			0.155
Available staff	15(11.100)	13(9.90)	
Flexibility	8(5.90)	15(11.50)	
Good HW attitude	67(49.60)	74(56.50)	
Short waiting hours.	22(16.30)	17(13.00)	
Vaccine	23(17.00)	12(9.20)	

## DISCUSSION

Our research has shown that the participating women had different sources of FANC knowledge. More than two thirds get their information from their relatives followed by health workers. While studies in Malawi show that radio is the most common source of knowledge [11].

More than 90% mention that the benefit of FANC is for the reception of pregnancy related vaccines and supplements, more than 70% early detection of pregnancy related risks and assist the provider in providing individualized information, training and communication, and half of them agree with establishing rapport.

Other studies showed that providing pregnant women with opportunities for dialogue and health talks during visits played a key role in improving their ability to participate fully in the ANC [12, 13].

In our study age did not affect Focused Antenatal care(FANC) utilization, which is similar to the finding in studies that have been, conducted Erbil [14], Karachi [15]. In Sana'a City, Yemen <sup>16</sup>, However, In other research, as in Sudan, there is an significant association between ANC attendance and maternal age [17].

Education has not affected the use of FANC in this study; which is consistent with studies in Sana'a City in Yemen <sup>16</sup> and in Ntchisi district in Malawi [11]. While studies conducted in Erbil [13], Diyala,[18] Egypt [19], Vietnam,<sup>20</sup> and Uganda <sup>21</sup> Show a statistically significant association between women's educational

levels and ANC visits. The lack of impact of education on the use of FANC in our study may be due to the women surveyed having a low level of education, making it difficult to show a difference.

Occupational status of the respondent mothers and their husbands was not associated with low utilization of FANC services. ; which is in line with studies conducted in Sana'a City Yemen ,<sup>16</sup>Ntchisi district in Malawi [11], karashi [15]. This is different from other studies conducted in Erbil city ,<sup>14</sup> and Indonesia<sup>22</sup>that showed significant association between ANC attendance and occupation of the respondent mother.

Our study showed statistical significance between many socio-cultural factors and low utilization of FANC as being too busy, feeling healthy and not necessary to have antenatal care, pregnancy is ordinary issue, living away from antenatal care services and cost of transportation, long waiting time, while other factors showed no significant relation with low utilization of FANC as satisfaction, being accompanied by husband or being forced to conceive.

In other research, pregnancy has been associated with a higher likelihood of early initiation and appropriate antenatal care attendance as compared to an unintended pregnancy. Another study in Holeta, central Ethiopia <sup>23</sup> discovered that women who had an unplanned pregnancy were 67 percent less likely to attend ANC than those who had a planned pregnancy.

Our study showed statistical significance between low utilization of FANC and living away from ANC, And this is close to the results from (Malawi and Kenya) [11, 24] suggesting that delayed initiation of ANC usage and low attendance frequency were correlated with a long distance to reach a health facility.

Also this study showed statistical significance between long waiting time and low utilization of FANC and this is also in agreement with those of Egypt [19].

In our study there is no statistical significance between bad obstetric history and low utilization of FANC. While studies in Ethiopia show that women who had health problems were twice as likely to attend Focused Antenatal Care(FANC) as opposed to those who did not have such problems [25, 26]. Mothers with a history of abortion were four times more likely than those who did not experience such a history to attend FANC [25].

Our research has shown that multiparous women make substantially more visits to FANC than nulliparous women, statistically significant between parity and FANC usage. This may mean that women were inspired to continue their ANC screening, and this is consistent with the Al-Hilla City Descriptive Study<sup>27</sup> and the Sudanese study.<sup>18</sup> While other studies in Malawi have shown an inverse association between parity and the use of FANC,<sup>11</sup> a study in rural areas of India has also found that the proportion of women providing ANC services with a growing number of living children has been statistically significantly reduced [28].

This study shows a statistical significance between Knowledge, attitude of the participants and low utilization of FANC like the site of ANC and the proper time of registration for ANC .In addition when they were asked about what they like most with ANC services at current facility most of them mention good health worker attitude but without statistical significance with low utilization of FANC.

The preference of the study women to utilize both PHC and private clinics for ANC, due to their perception about good ANC in PHC and private clinics. Unlike to study in Egypt they utilize the private clinics for ANC due to their perception that high quality antenatal care in private clinics as compared to PHC [19].

Regarding the proper time of registration for ANC (time of booking visit) was in the second trimester, and this is why more than 90% mention that the benefit of FANC Is for the reception of pregnancy related vaccines and supplements. While in Sana'a city Yemen, Egypt<sup>16,19</sup> attended within the first trimester.

Most of our study participants when they were asked about what they like most with ANC services at the current facility mention a good health worker attitude but without statistical significance with low utilization of FANC. While other research shows that

developing a good rapport with pregnant women will lead to their achieving the recommended number of antenatal visits. Researchers, on the other hand, have found out that low-quality care may have a negative effect on ANC attendance due to the weak communication skills of providers (which may include an negative attitude on the part of staff.<sup>23</sup> In our study one of the factors contributing to absence of statistical significance with low utilization of FANC even they satisfy with the health worker attitude may be due to inadequate knowledge or misunderstanding of pregnant women on ANC benefit so they not attend Focused Antenatal care (FANC) , also cultural situation might be affected a women not to decide by themselves but they not mention that when we ask if she fell embarrassed.

## CONCLUSION

The current study identified a statistical significance between low utilization and parity, being too busy , feeling healthy and not necessary to have ANC , pregnancy is ordinary issue , living away from ANC

services and cost of transportation, long waiting time, also identified a statistical significance between Knowledge, attitude of the participants and low utilization of FANC like the site of ANC and the proper time of registration for ANC while other factors showed no significant relation with low utilization of FANC.

More than two thirds get their information on FANC from their relatives followed by health workers. More than 90 % indicate that the advantage of FANC is to obtain vaccines and supplements related to pregnancy, more than 70 % identify pregnancy-related risks early and help providers provide individualized information, education and communication, and half of them agree to develop rapport.

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#### AUTHOR'S CONTRIBUTION

ALRamadhan Jinan conceived and designed the study. ALRamadhan Jinan and ALABRAHIM Maisaa performed data collection. Al-Abboodi Huda analyzed the data. Al-Abboodi Huda. Al-Hilfi Azhar interpreted the data. ALRamadhan Jinan and ALABRAHIM Maisaa wrote and revised the manuscript. All authors read and approved the final manuscript.

#### CONFLICT OF INTEREST

Nil

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Nil

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