RESEARCH PAPER

Antenatal care field survey in the catchment area of Bab Al-Moatham Primary Health Care center, Baghdad

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Abstract

ANC is described as care provided to pregnant women and adolescent girls by experienced personnel with substantial healthcare training in order to ensure the greatest possible health circumstances for both the mother and the fetus throughout gestation. The objective of this study is to find the percentage of antenatal care booking, care regularity and antenatal care irregularity. This study is a cross-sectional field survey with an analytic element conducted from 1st January -1st July 2018. We chose 10% of all the catchment area (shown in block numbers) as a two-stage cluster sampling method. Fifteen clusters (one cluster for every 180 families in the block) were chosen, each with 15 households, for a total of 225 households. There were two to three married women of reproductive age (15-49 years old) in some houses, bringing the total female participation to 255.This study was done in Bab Al-Moatham Primary Health care center. it revealed that most houses 195(76.47%) have one adult woman of reproductive age per house, 106(41.6%) of participant's age between 30-39 years, 77(30.2%) married between 2012- 2007, and 87(34.1%) completed primary school. In concern to women reproductive history, the highest percentage have two pregnancies, two babies, without abortion or stillbirth. Out of 255 studied women, During the previous three years, 236 women were pregnant, 191(80.93%) of them had ANC booking, 148(58.1%) have regular ANC visit, while 43(16.9%) have irregular ANC visiting, and 188(98.43%) of them had ANC card. Abortion represents a major problem for irregularity in consuming ANC services. Improving health services and health promotion are essential steps in reducing abortion which might lead to increase ANC booking.

Keywords: Antenatal care, primary health center, Baghdad, Bab Al-Moatham, survey

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Introduction

Antenatal care (ANC) has been defined as care given by skilled individuals with extensive healthcare training to both pregnant women and adolescent girls to ensure the best possible health conditions for both the mother and fetus during gestation [1], and it is an important period where the woman's health and behavior in pregnancy affect her baby. A poor diet, smoking, intake of alcohol, certain drugs, and severe illnesses can hold back the baby's development. Hence during pregnancy care and proper medications become inevitable [2].

ANC provides a platform for essential healthcare functions, including health promotion, screening

and diagnosis, and disease prevention [1], and it is found that the ANC has potential importance for improving child health and vital outcomes in low-income and middle-income countries and might be an important tool to reach the third Sustainable Development Goal by 2030. [3]

Based on a systematic analysis by the UN maternal mortality estimation inter-agency group, in 2015 alone, approximately 830 women die every day globally due to complications during pregnancy or child-birth; around 99% of these deaths take place in developing countries [4, 5, 6]

In 2016, World Health Organization's new antenatal care model increased the number of contacts a pregnant woman has with health providers throughout her pregnancy from four to eight. Recent evidence indicates that a higher frequency of antenatal contacts by women and adolescent girls with the health system is associated with a reduced likelihood of stillbirths. This is because of the increased opportunities to detect and manage potential problems. A minimum of eight contacts for antenatal care can reduce perinatal deaths by up to 8 per 1000 births when compared to a minimum of four visits. The new model increases maternal and fetal assessments to detect problems, improves communication between health providers and pregnant women, and increases the likelihood of positive pregnancy outcomes. It recommends pregnant women to have their first contact in the first 12 weeks of gestation, with subsequent contacts taking place at 20, 26, 30, 34-, 36, 38- and 40-weeks of gestation. This Antenatal care model with a minimum of eight contacts recommended reducing perinatal mortality and improving women's experience of care. [1]

Figure (1): Comparing figure between WHO-FANC and WHO-ANC 2016[1]

In addition, a Turkish study discovered that prenatal counseling on breast milk and breastfeeding has a substantial impact on the earlier initiation of breastfeeding and exclusive breastfeeding for the first six months of life. Based on the results of the study, it can be recommended that breastfeeding counseling should be offered continuously. [7]

Evidence to support that antenatal care screening and intervention are effective in reducing maternal mortality has been scanty and studies have presented contradictory findings[8]. So the aim of this study was to identify the percentage of booking regularity and causes of irregularity in antenatal care

Methods

Study design and setting: A cross-sectional field survey with an analytic element conducted from 1st January -1st July 2018.

Survey Sample: To guarantee that the sample of households was representative of the catchment region, we chose 10% of the total catchment area (given in block numbers) as a two-stage cluster sampling approach. Fifteen clusters (one cluster for every 180 families in the block) were chosen, each with 15 households, for a total of 225 households. There were two to three married women of reproductive age (15-49 years old) in some houses, bringing the total female participation to 255. (Table 1)

Table (1) Distribution of studied families according to their residency block:

Block No	No. of families	Clusters no. (1/180)	chosen household	No. of married women in reproductive age we found in the choosing household	%
112	364	2	30	33	12.9
116	191	1	15	22	8.6
118	394	2	30	35	13.7
119	530	3	45	42	16.5
120	394	2	30	35	13.7
137	885	5	75	88	34.5
Total	2758	15	225	255	100.0

A **household** includes all the persons who occupy a housing unit as their usual place of residence. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. [8]
A **pilot study** to the designed questionnaire was tested with 30 families, and the opinion of three gynecologists/obstetricians, two community physicians, and two family physicians were taken in consideration.

Data collected from 1st February -15th March 2018, and data analyzed done by use SPSS ver. 23. And P-value less 0.05 was considered significant. We announced the survey with the help of mukhtar, schoolteachers, mosque Muezzin, other index persons.

Ethical consideration:
Verbal consent to participate taken from each female, after informing her about the study objectives, time consumption, security of their answers, free to participate, and future benefits to their community.

Results

This research was conducted in Bab Al-Moatham Primary Health Care Center, and it revealed that most houses 195(76.47%) have one adult woman of reproductive age per house, 106(41.6%) of participant's age between 30-39 years, 77(30.2%) married between 2012- 2007, and 87(34.1%) complete primary school. (Table 2)
In concern to women reproductive history, the highest percentage have two pregnancies, two babies, without abortion or stillbirth. (Figures 2-4).
Out of 255 studied women, During the previous three years, 236 women were pregnant., 191(80.93%) of them had ANC booking, 148(58.1%) have regular ANC visit, while 43(16.9%) have irregular ANC visiting, and 188(98.43%) of them had ANC card. (Table 3)
The main cause of ANC irregularity in clients was abortion (36%) followed by "going to private clinic" (25%), (Figure 5)
While the main cause to no ANC booking was "going directly to the private clinic" equally with "going to the ex-PHC" (22%) for both and

followed by the woman not heard about the ANC program (13%) all shown in figure (6).

The study revealed a significant relation between studied women's ANC booking and their age, marriage years, but not with educational level. (Table 4)

Also, significant relation was found between studied women's regular ANC visiting and total number of pregnancies. (Table 5)

The studied women were suggested increase the durgs availability in the PHC and more than one type 10(21%), followed by cost decrement and improving services, 5(10.4%) for each. Most of block 118 suggest having their primary health services in the medical city because they are close to it and away from the PHC; as appear in the figure (7).

Discussion

The consequences of pregnancy and childbirth are still the leading causes of maternal morbidity and mortality in developing countries [10].

In our study regarding the number of married women of reproductive age, we found in the survived household was 255, 106(41.6%) of participant's age between 30-39 years which is similar to the Ethiopia study [10]. The mean (standard deviation) age was 27.8 (4.67) years (ranging from 15-40 years) while11.8 % of the study group can read and write, 87(34.1%) complete primary school and, 45.9% complete secondary school and above.

In Ethiopia study [10] 25.9% can read and write, 46.3% cannot read and write, 26.2% primary school and 1.6 secondary education and above. This indicates that women in Iraq who can read and write are far more numerous than Ethiopian women which might be a reflection of Iraqi women's perceptions toward ANC visits. Also, in

our study 10% attempt abortion one time (Fig 4). Which is in concordance with the Ethiopia study [10] 57(9.1%) were attempted abortion at least 1 time.

About 165 (65%) of our study subject have been pregnant more than 2 times (Fig 2). Which is concordance with Ethiopia study [10] About 405(64.7%) of the study subjects have been pregnant more than 2 times.

Out of 255 studied women, 191(80.93%) of them had ANC booking, 148(58.1%) have regular ANC visit, while 43(16.9%) have irregular ANC visiting. (Table 3)

In Rahman's study [6] About 55% of the women received at least one professional ANC service; 21% received four or more professional ANC services.

While the main cause to no ANC booking (in our study) was "went direct to the private clinic" equally with "went to previous PHC" (22%) for both and followed by the woman not heard about the ANC program (13%), far away PHC, husband refuses and time consume 7%. (Fig 6)

In Zeine Abosse's study [12] Regarding the reason for not attending ANC, 62 (65.3%) of the mothers responded that they were healthy during their last pregnancy. Other reasons mentioned include other family matters 52.6%, lack of awareness 19%, too far facility11.6%, no husband support8.4%, and long waiting time4.2%.

In Kawungezi study [14] Religion, occupation, level of education, and parity were found to influence place of ANC attendance, number of ANC visits and booking time.

In this study the relation between women's no ANC booking & their age marriage, 15-29 year N (86) is 10(11.6%), 30-49year N (150) is 35 (23.3%), which is similar to Rwanda study [13]

participant age in relation to poor ANC, age group 15-30 year is 72(11.4) and age group 31-46 year is 50(17.4).

Conclusion

Abortion represents a major problem for irregularity in consuming ANC services. In regards to pregnancy services, there is a deficit of medicine supplies in the primary health facility. Many pregnant women would rather visit a private clinic than a primary health institution.

Health authorities should have a systematic plan and provide effective antenatal care for women attending primary health care. Improving health services and health promotion are essential steps in reducing abortion which might lead to increase ANC booking.

Conflict of interest: The authors declare no conflict of interest.
Financial Support: None declared.

Table (2): Distribution of studied women according to the demographic features:

|		Frequency N=255		Percent
adult reproductive women/ house	one woman/house	195×1	195	76.47
	two woman/house	21×2	42	17.25
	three woman/house	6×3	18	7.06
Beginning of Household residency	2013 -2018	69		27.1
	2012- 2007	52		20.4
	2006-2001	31		12.2
	2000 and before	103		40.3
age	15-18 yr	7		2.7
	19-29 yr	81		31.8
	30-39 yr	106		41.6
	40-49 yr	61		23.9
marriage year	2013 -2018	53		20.4
	2012- 2007	78		30.0
	2006-2001	69		26.5
	2000 and before	60		23.1
educational level	not read not write	21		8.2
	read and write	30		11.8
	primary complete	87		34.1
	secondary complete	72		28.2
	Institution and above	45		17.7
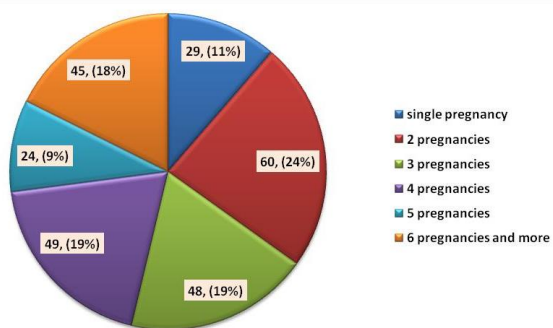
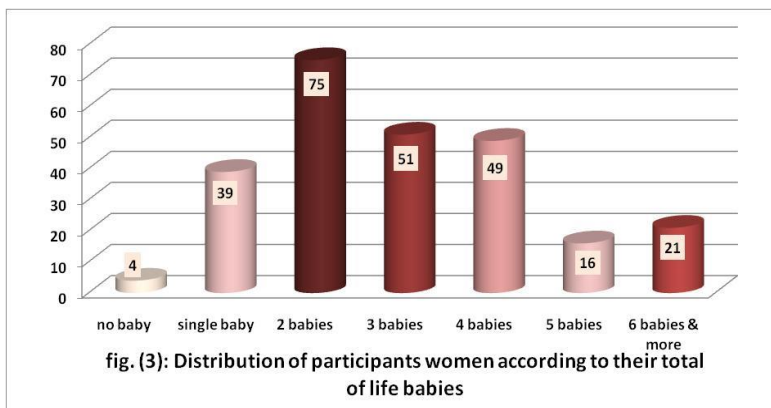Fig. 2: Distribution of participants women according to their total pregnancies

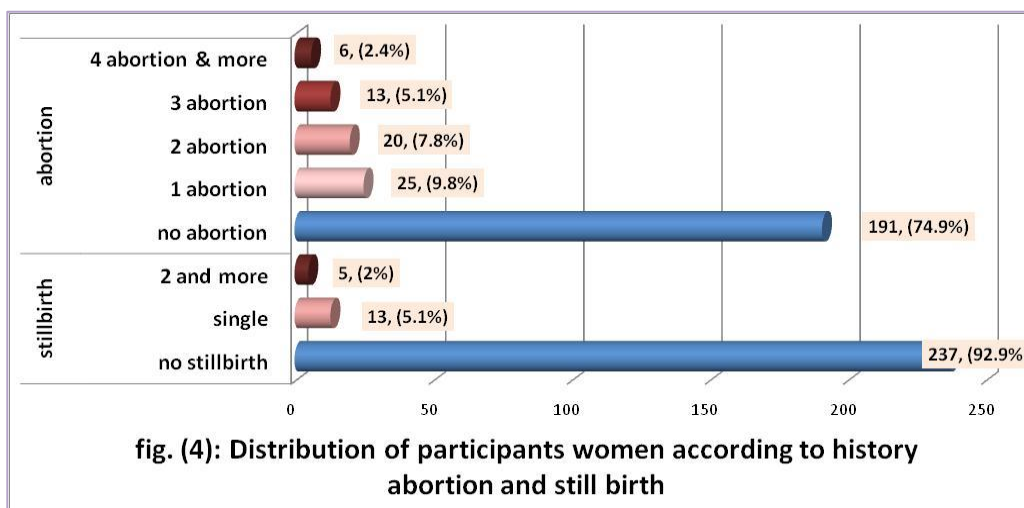fig. (3): Distribution of participants women according to their total of life babies

fig. (4): Distribution of participants women according to history abortion and still birth

Table (3): Distribution of studied women according to antenatal care booking and card, and regularity of ANC visiting:

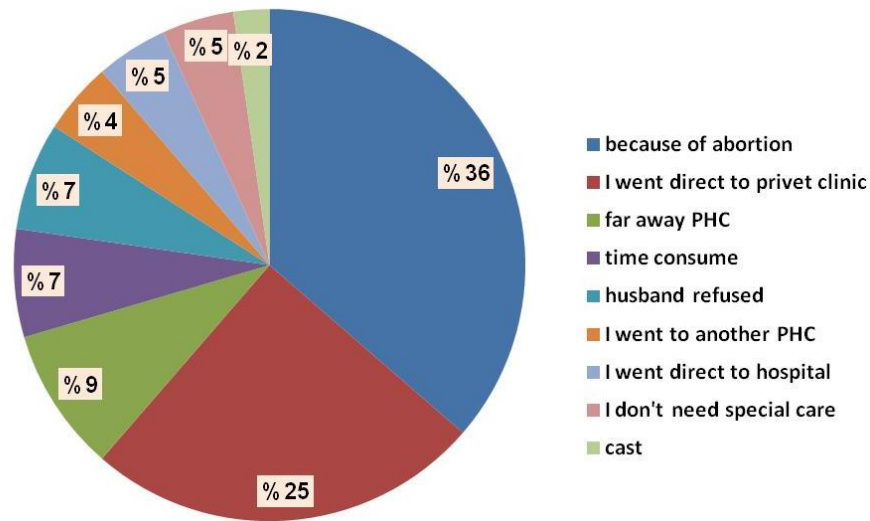|		**Frequency**	**%**
Pregnancy within 3 years (N=255)	**Yes**	**236**	**92.5**
	No	**19**	**7.5**
Antenatal care booking (N=236)	**Yes**	**191**	**80.93**
	No	**45**	**19.07**
Have regular ANC visiting (N=191)	**Yes**	**148**	**58.0**
	No	**43**	**16.9**
Present of antenatal care card (N=191)	**Yes**	**188**	**98.43%**
	No	**3**	**1.57%**

Fig (5): Distribution of participant's women according to possible causes behind ANC irregularity
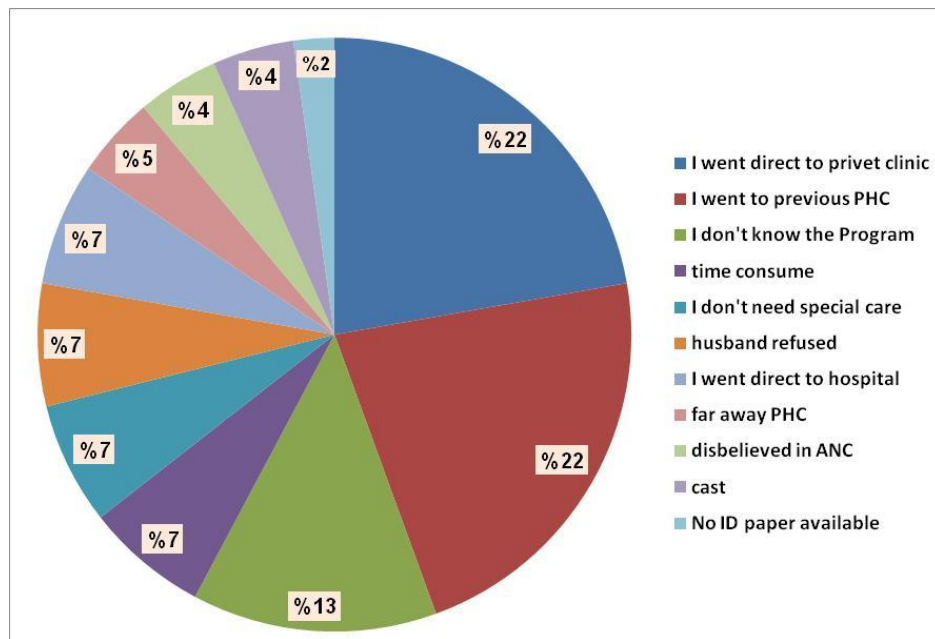

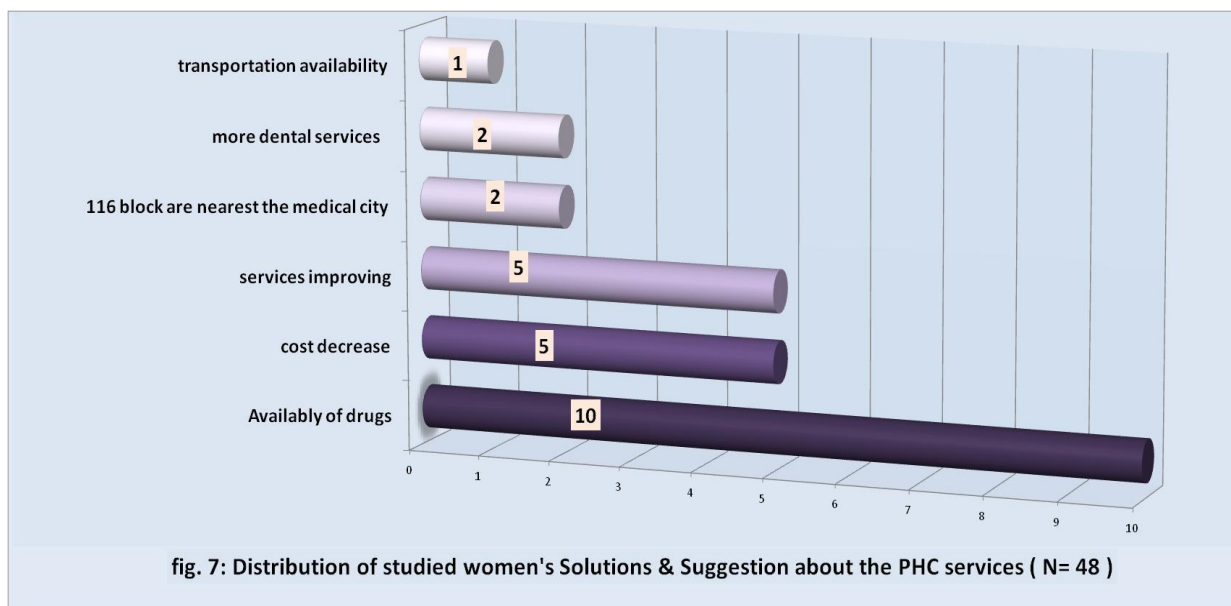**Fig 6: Distribution of participants according to their causes of no ANC booking (N=45)**
Table 4: Relation between women's ANC booking & their age, marriage year, and educational level:

Table 4 Relation between studied women's ANC booking and their age, marriage years

		ANC booking		P -value
		Yes (N=191)	No (N=45)	
age	15-18 yr	5	2	**0.019**
	19-29 yr	71	8	
	30-39 yr	81	19	
	40-49 yr	34	16	
marriage year	2013 -2018	39	10	**0.004**
	2012- 2007	62	11	
	2006-2001	57	6	
	2000 and before	33	18	
educational level	not read not write	16	4	**0.754**
	read and write	24	5	
	primary complete	61	18	
	secondary complete	55	13	
	Institution and higher	35	5	
Note There are 19 women who have not been pregnant in the preceding three years.				

Table 5: Relation between studied women's reproductive history and their regular ANC visiting:

		have regular ANC visiting		P-value
		Yes (N=148)	No (N=43)	
total pregnancy	single pregnancy	20	5	**0.022**
	2 pregnancies	**35**	5	
	3 pregnancies	34	6	
	4 pregnancies	28	7	
	5 pregnancies	10	9	
	6 pregnancies & more	21	11	

fig. 7: Distribution of studied women's Solutions & Suggestion about the PHC services (N= 48)

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