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And Scientific Research
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College of Medicine



**Assessment of the Satisfaction of Pregnant Women about Antenatal
Care Services in Primary Health Care Centers in Holly Kerbala
City, 2023**

By

Mena Muneer Sahib AL-Tuma

M.B.CH.B

Supervised by:

Assistant Professor
Dr. Basheer Aqeel ALAli
M.B.CH.B/A.B.H.S/C.M.

Dr.
Fareed Abass Hussein
M.B.CH.B/F.I.B.M.S./F.M.

2022 A.D.

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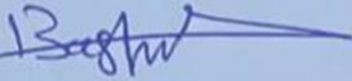
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Certification of the Supervisor

We certify that this thesis "Satisfaction of pregnant women about antenatal care services in Primary Health Care Centers in holly Kerbala in 2023 " was prepared by Mena Muneer Sahib ALTuma under our supervision at the College of Medicine /university of Kerbala.



Signature

Assistant Professor

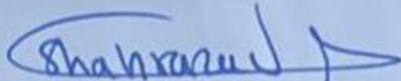
Dr. Basheer Aqeel ALAli
M.B.CH.B/A.B.H.S/C.M.



Signature

Dr.

Fared Abass Hussein
M.B.CH.B/F.I.B.M.S./F.M.



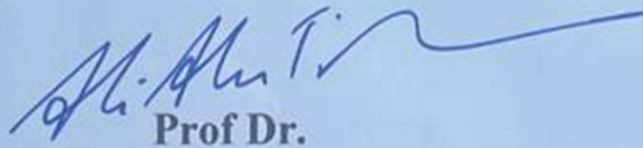
Signature

Assistant Professor

Dr. Shahrazad S. Al Jobori
Head of family and Community Medicine Department
College of Medicine-University of Kerbala

Committee Certificate

We are members of examining committee, after carefully reading this thesis and examining the candidate (Mena Muneer Sahib AL-Tuma) and its content, find that it meets the standards and requirements as a thesis in partial fulfillment of the requirement for high diploma degree in family medicine.



Prof Dr.
Ali Abdulridha Abu Tiheen
Family medicine specialist
(Chairman)



Prof .Dr.
Ali Mousa Al Mousawi
Community medicine specialist
(member)



Dr.
Qais Ismail Kadhem
Family medicine specialist
(member)

Approved by

College of Medicine/University of Kerbala

As a thesis for the degree oh Higher Diploma in Family Medicine



Prof .Dr.Riyadh Dheyhood AL-Zubaidy

Dean of

College of Medicine/University of Kerbala

Dedication

To my family and my husband, who never stop support me.

To the college I graduated from and to all my teachers in my life, those who taught me science, ethics and humanity....

To my holly city Kerbala.

To my great country ...Iraq.

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Abbreviations

<i>Abbreviations</i>	<i>Full name</i>
ANC	<i>Antenatal Care Unit</i>
PHCC	<i>Primary Health Care Centers</i>
HIV	<i>Human Immune Deficiency Virus</i>
WHO	<i>World Health Organization</i>

Abstract

Background: Antenatal care (ANC) is the care that the pregnant received from health professionals during the pregnancy. However, the use of ANC service by pregnant women could be affected by the level of their satisfaction with the service provided at the health care facility.

Subjects and method: Descriptive study was conducted from 25 January to 28 October 2023 to assess satisfaction of pregnant women about ANC services among pregnant women in Kerbala holly city, Iraq. The sample consisted of (400) women randomly selected from Four primary Health Care Centers (PHCC) that provided daily antenatal care services, the questionnaire was designed depended on previous studies.

Results: According to the overall satisfaction level, the results show that 87.25% of the pregnant women were satisfied, whereas 12.75% were not satisfied.

In regard to association of the overall satisfaction level with the socio-demographic characteristics of pregnant women, the results concluded that there was highly significant difference in satisfaction level between the Four PHCCs ($p < 0.001$). Regarding education, pregnant women with college and higher education was significantly have the lowest satisfaction level in relation to other educational levels ($p = 0.008$). Also, pregnant women with rural residence were significantly have the highest satisfaction level in relation to urban or slum area ($p < 0.001$).

Conclusion: The satisfaction rate of pregnant women about the services in the antenatal care units was more than three quarter of participant. The type of health facility, education status, number and the time of initiation antenatal visit, history of abortion, the time that the pregnant waiting to get service, communication with the doctor and staff, investigation, cost, medication and supplement found, health and diet education, were factors associated with pregnant women's satisfaction with antenatal care services.

Aim of the study: To assess the satisfaction of pregnant women about the antenatal care services in Kerbala city.

Chapter One

Introduction

Introduction

Antenatal care is regular contact with skilled health personnel during pregnancy - is a core component of maternity care. (who.int/activities/promoting-healthy-pregnancy)

The doctor providing antenatal care will:

- Check the health of pregnant and her baby.
- Give useful information to help the pregnant to have a healthy pregnancy, including advice about healthy eating and exercise, birth plan (**Hayman et al., 2020**).
- Answer any questions that the pregnant have (**Birhanu et al., 2020**).

The antenatal care history back to the 18th century when the obstetrics and gynecology start to develop and focus on them (**Abadía-Barrero et al.2019**) it was expected that multiple visits were important in the care of pregnant as a result, frequent visits were the stander, and according to these visits pregnant women were classified as high and low risk women and their babies, then it shifted to new model of ANC (**Birhanu et al., 2020**).

Old version of antenatal care:

The first visit or initial visit of the antenatal care should be made as early as possible in pregnancy.

Return Visits:

- Every month one visit till 28 weeks.
- Every 2 weeks one visit till the 36 weeks.
- Every week one visit during the 9th month, till labor (**Suleman Hassen et al. 2021**).

The focused antenatal care consists of four visits distribute first visit at (8-12) weeks, second visit (24-26) weeks, the third visit (32) weeks and the fourth (36-38)

weeks. Antenatal care is important for better maternal, perinatal and infant health outcome. Inadequate follow up lead to poor pregnancy outcome and increase maternal risk (Ayalew et al. 2021).

Antenatal care visits:

- 1st visit before 4 months (16 weeks)
- 2nd visit 6 months (24-28 weeks)
- 3rd visit 8 months (30-32 weeks)
- 4th visit 9 months (36-38 weeks)

All pregnant women should receive four antenatal routine visits. The first visit of antenatal care should be as early as possible in pregnancy. During the last visit, the pregnant women should be inform that she should return to the PHCC after 2 weeks from the expected date of delivery if she does not deliver for evaluate the health of fetus . According to national malaria or HIV policies, multiple visits or different schedules may be required. If women are HIV-infected ensure a visit between 26-28 weeks (Woldeamanuel et al.2021).

Follow-up visits: (Iqbal et al.2020)

If the problem was:	Return in:
Hypertension	Every 1 week if >8 months pregnant
Severe anemia	Every 2 weeks
HIV-infection	Every 2 weeks after HIV testing

The World Health Organization (WHO) updated its recommendations from a minimum of four antenatal care contacts to a minimum of eight contacts to reduce perinatal mortality and to improve women’s experience of care. However, data reporting at the global, regional and country levels are currently only available for

a minimum of four visits, aligned with the previous recommendation (**WHO, 2016**).

Routine Vaccines: (Habte et al.2024)

Immunization of pregnant women is important to protect the mother, fetus and infant from infection has increasingly been used over the last century. Maternal antibodies are transferred from mother to infant during pregnancy through trans placental transport or after delivery through breastfeeding and this antibodies give protection against infections in early life, and this is consider a challenge, due to lack amount of the evidence-base to guide decisions, and pregnant women who are at high risk of disease exposure, where health could pose a threat to the mother or fetus, and where vaccination is unlikely to cause harm, typically find that the benefits of vaccination outweigh the risk. (**Kebede et al. 2020**).

In Iraq (PHCC) the most commonly used vaccine is toxoid, the first dose was given during the fourth month of the pregnancy, the second was given after one month from the first dose, the third dose was given after six months from the first dose the fourth dose was given after one year from the third dose, and the fifth was given after one year from the fourth dose, and these five doses give lifelong immunity to the pregnant women (**Iraqi Ministry of Health**).The satisfaction of Patient is an important factors that aim to assess and raise the level of the services of the PHCC health care . So, in most of countries in ANC improvement programs the opinion of pregnant women consider as essential elements. This step is important to ensure the patient's continuous follow-ups and ensuring a good relationship between a pregnant woman and the physician. Satisfaction of the pregnant women is an important element for evaluating the PHCC performance (**Kebede et al., 2020**). Many maternal death and prenatal deaths occur in women with little use of antenatal care (ANC), but the using of ANC services is affected by a pregnant mothers' satisfaction. However, increasing access globally leading to

made true progress. Worldwide, no any antenatal care services have been received by 70% of pregnant women, while in developed countries, more than 95% of women who are pregnant receive ANC. (**Ruas. 2020**).In 2017, there were 295,000 maternal deaths worldwide, which are leads to 211 maternal deaths for every 100,000 live births. Of these deaths, 99% occurs in developing countries (**Lawrence et al., 2022**).In Iraq, maternal and newborn deaths are still at high levels. In fact, Iraq is among 68 countries that account for 97% of all deaths worldwide. Maternal deaths can be reduced by adequate antenatal care follow up during pregnancy, can decrease maternal and child death during childbirth and after it (**Al-Abedi, 2021; Montasser et al., 2012**).In Kerbala city, maternal death in 2020,2021,2023 were (19.1%,65.9%,24.1%)respectively.childcare.cosit.gov.iq.Satisfaction with antenatal care services is affected by different factors such as structure (physical environment and availability of sufficient human resources, medicines, and supplies), process (interpersonal behavior, privacy, promptness, cognitive care, perceived provider competency, and emotional support), and outcome (health status of the mother and fetus). It is also associated with sex of the health-care provider, the religion, educational status, residence, ethnicity, and age of the mother, history of antenatal care, waiting time, transportation, distance of health facility from home, type of pregnancy, and history of abortion.

It is known that a satisfied client is more likely to comply with treatment and advice she receives from health care professionals (**Aldebasi et al.2011**)

Different studies in different parts of the world revealed that maternal satisfaction with antenatal care was affected by examination room cleanness, health care provider attitude, quality of antenatal care service provided, adequacy of information provided by the health care professionals, waiting time, supervision of antenatal care, adequacy of water supply, adequacy of waiting area, educational

status of the mother, monthly income, type of pregnancy and history of stillbirth, patient's previous experiences, social and cultural norms, physical environment, availability of adequate resources (human, medicines, equipment, and supplies), adequacy of clinical care, and access to treatment in health care facilities. (**Haile, M., Hunduma, F., & Haile et al.2022**). Assessment of the services provided by PHCC can be assessed by SERVQUAL model is a framework for assessing service quality. It was developed by Parasuraman, Zeithaml, and Berry in the 1980s. It measures the gap between customer expectations and perceptions of the service. It consists of five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. These dimensions are crucial for determining the quality of service. The model is also known as the RATER model. (**Al-Khayat, A. and Al-Hadithi, T.S.;Ismael, W.I. and Farhood, H.F., et al.2019**).In AL-Amara city in Iraq in 2021 showed that the satisfaction level regarding prenatal care services was (85.7%) which is consider more than three quarters of the women. That show a significant correlation between the satisfaction of the participants with their socio-demographic data and their health history, with the exception of the monthly income, however there is no significant correlation between level of satisfaction and the services provided at PHCC (**AL-Abedi et al. 2021**). In Maysan, ANC services (84.9%). (**Haifaa Kadhim, A.Z. and Fadhil, S.N., et al 2024**), in Basrah, the satisfaction was 67% (**Al-Khayat, A. and Al-Hadithi, T.S. et al. 2019**),in Erbil the satisfaction was (78%)(**Al-Khayat, A. and Al-Hadithi, T.S., et al 2019**),While a study done in Primary Health Care in Cluster One in Riyadh, Saudi Arabia in 2022 show that 93.7%, 87.8%, 71.8%, and 53.9%, respectively the overall satisfaction with initial triage evaluation, services provided, consultation, and examination . Regarding ANC services, the study show that pregnant women satisfaction with ANC services was influenced by statistically significant variable related to education. In contrast, there was significant correlation with the satisfaction with

the provided care related to all the variables studied. For consultation, education and monthly income were the statistically play a significant role. Secondary education was statistically significantly related to the provided services, consultation, and examination. Even if the satisfactory level of ANC at the selected PHCC, improving the consultation and examination practices could lead to increase higher patient satisfaction in the future. The general level of satisfaction with the health care provider is high at PHC (**Alhaqbani et al.2022**). At a different parts of Ethiopia, pregnant women Satisfaction with antenatal care services ranges within Ethiopia, from 33.4% to 83.9%. This indicate inconsistent and varied quality of antenatal care services (**Chemir et al., 2014**).Several research studies were conducted worldwide about the satisfaction of pregnant women with antenatal care services. According to a study in Sweden that was conducted show that 82% of the total study participants were satisfied with antenatal care services. Another study at primary health-care facilities of Pakistan show that 46% of the all participant pregnant women were satisfied with antenatal care service. (**AL-Abedi et al.2021**).A maternal satisfaction survey was conducted at different times in different countries for instance, in 2012 and 2018 in Egypt (**H Hussein and S Said, 2020**) and Nigeria(**Ademuyiwa et al. 2021**) the level of maternal satisfaction with ANC was greater than 90% and 90%, respectively, while in Ethiopia, the levels of maternal satisfaction with antenatal care in 2008, 2013, 2014, 2018, and 2019 were 35%, 47.7%, 60.4%, 90%, and 90.8%, respectively (**Gelaw and Gebeyehu, 2020**).

A study carried out in Malaysia revealed that 75.4% of mothers satisfy with the antenatal care services provided. (**Rahman et al., 2016**). In Myanmar the satisfaction was 48% (**Hsai et al., 2020**), in Ghana the study show that 92.7% of

pregnant women were satisfied with the provided antenatal care services (**Asafo and Adoma, 2019**).

The aim of this research: is to evaluate the satisfaction of pregnant women in holly Kerbala city/ Iraq, which reflects good services or not and this led to good follow up from the pregnant and the good follow up lead to decrease maternal and child death, in low- and middle-income countries they remains a public health problem (**Selgado et al. 2019**).When given good quality and regular attendance maternal mortality which can be decreased by 20%. Pregnant women who attend ANC during pregnancy are more likely to use postnatal healthcare services and an important entry point to start education the mothers about the health benefits of attended delivery (**Geremew et al., 2020; Sahoo et al. 2021**)

Chapter Two

Subjects and Methods

Methodology:

2.1. Study Design:

A cross-sectional study, conducted from 28 January to 25 October 2023 to assess satisfaction of pregnant women about ANC services among pregnant women in Kerbala holly city.

2.2. Study setting:

The study was conducted in four PHC Centers; which were chosen by random sampling technique by chosen Center sector and Al Hussania sector in Holly Kerbala City in Iraq, and then chose Two PHCC from each sectors, Al-Mulhaq and Al-Nasir primary health care centers in the center of Kerbala City, whereas, Al-Taf and Al-Zahraa PHCC in Al-Hussania the rural area of Kerbala holly city.

2.3. Sample Size calculation:

We used the Raosoft sample size calculation method for estimating the required sample size through the following equation:

$$n = [(Z*0.95)^2 \times p \times (1 - p)] / (0.05)^2$$

Where n is the sample size, Z is the Z value (1.96 for 95% CI), and p is the proportion or prevalence that met our criteria; p was set as 0.5, because the proportion was not known.

The calculated sample size was 400 to achieve a confidence level of 95% and a precision of ± 0.05 . (Asres, A.K., Amogne, Y et al. 2023)

2.4. Sampling Technique:

In Kerbala City, a multistage stratified random sampling method adopted to select Four PHC Centers, two in the center and two in rural area. In each PHC Center 2023, we select 100 pregnant women were selected and estimated the sample size required 400 participants.

2.5. Instruments and Data collection:

Data collected by face-to-face interview. The data relevant to the study purpose obtained through a special structured validated questionnaire. (Bekele, G.G., Seifu, B. and Roga, E.Y et al. 2023) The items of the questionnaires were either formulated or identified and extracted from published questionnaires, and scientific literature. The final instrument designed for the purpose of the study was reviewed; the questionnaire consists of three main sections:

Section I: Information regarding socio demographic variables for mother and father such as: age, residency, level of education, occupation, and income.

Section II: Information regarding obstetric state for pregnant women.

Section III: Information regarding the services in the PHCC for pregnant women.

This domain consisted of 13 items and used to investigate pregnant women satisfaction about the ANC services. The questions had the following response categories: (strongly not satisfied, not satisfied, not sure, satisfied, and strongly satisfied).

The score assigned to each response ranges from 1 to 5, with the maximum score assigned to the highest satisfaction scores, and the minimum score to the least satisfaction one. The total score of this section was 65, ranging from (13-65).

2.6. statical analysis:

The 5-point Likert-type scale of the 13 satisfaction questionnaire items was scored for each item (from 1-5). Then the sum of the scores were obtained and divided by 13 to develop the mean satisfaction score

The overall satisfaction level was developed by categorizing the mean scores into two scales: Satisfied ($\geq 75\%$ of mean score), Not satisfied score ($< 75\%$ of mean score).

2.7. Data management:

- Setting up the rule for data entry.

- Coding the variables, before the beginning of collection of data and each variable given a specific code, the coding instructions were printed on the data collecting form, completeness checking for any missing of data or in accurate or imprecise data, editing the data.
- Data entry using a personal computer with use of the Statistical Package for Social Sciences (SPSS) IBM, US; version 23, for analysis and database management software (Microsoft excel), daily making of backup copy of data and store in another place. The descriptive statistics were used in term of frequency and percentage and mean \pm SD in appropriate tables and graphs. Possible association between two groups was made through the Chi-square test. Significance level was considered when $p < 0.05$.

2.8. Ethical considerations:

The study was approved by research ethical committee in the college of medicine in University of Kerbala and from the research ethical committee in Kerbala health directorate. We take official consent from each pregnant woman during the filling of questionnaire.

2.9. Exclusion criteria

- Women who were unable to communicate.
- Women who were seriously ill.

2.10. Time table:

Activity	Months					
	Nov-Jan 2022- 2023	Feb-Mar 2023	Apr-May 2023	Jun-Oct 2023	Feb-Apr 2024	Jun-Jul 2024
Getting Approval	√					
Literature Review	√	√	√	√	√	√
Questionnaire Preparation	√					
Data Collection				√		
Data Analysis					√	
Article Publication						√
Data Presentation						√

Chapter Three

Results

Results:

The results of the current study showed that about one half of the sample (204 pregnant women) aged between 20 and 29 years. Less than one third of the study participants completed secondary or higher education. The majority of the study women (92.7%) were housewife. More than three quarters of the study women reported medium monthly income as described in table 1 below.

Table 1: Socio-demographic characteristics of pregnant women attending antenatal care at Primary Health Care Centers in Kerbala City (n=400)

Characteristics	Categories	Frequency	%
Age (years)	Below 20	76	19
	20 - <29	204	51
	30 - <39	116	29
	>40	4	1
	Mean \pm SD	25.93 \pm 6.44	
Education	Illiterate	47	11.8
	Primary school	240	60
	Secondary school	69	17.2
	College and higher	44	11
Occupation	Housewife	371	92.7
	Employed	10	2.5
	Free work	19	4.8
Residence	Urban	160	40
	Rural	209	52.25
	Slum area	31	7.75
Monthly income	Poor	86	21.5
	Medium	307	76.7
	Good	7	1.8

Regarding the obstetric and reproductive health profiles of pregnant women, the results revealed that about one half of the pregnant women was Gravida 3 and above. First ANC visits accounted for 42% of the women and the 72.5% of these visits was during the first trimester. Regarding the gestation of current pregnancy, one half of the study participants were in the second trimester. Unplanned pregnancy reported by 43.25% of the study participants, whereas positive history of miscarriage was reported by about 3 quarters of the study participants as shown in table 2 below.

Table 2: Obstetric and Reproductive Health profiles of pregnant women attending antenatal care at Primary Health Care Centers in Kerbala City (n=400)

Characteristics	Categories	Frequency	%
Gravidity of Current pregnancy	G1	67	16.8
	G2	136	34
	G3	114	28.4
	G4 and above	83	20.8
Number of ANC visit	First	168	42
	Repeated visit	232	58
Time of the first visit	First trimester	290	72.5
	Second trimester	93	23.25
	Third trimester	17	4.25
Gestation of current pregnancy	First trimester	116	29
	Second trimester	203	50.75
	Third trimester	81	20.25
Type of pregnancy	Planned pregnancy	227	56.75
	Unplanned pregnancy	173	43.25
History of miscarriage	No	105	26.25
	Yes	295	73.75

Regarding the health service characteristics of pregnant women, 93% of the study participants reported that the travel time to PHCC was 30 mints or less. Most of the ANC provider was female 87.5%. Adequate Examination done by the doctor was reported by 84.7% of the pregnant women. The waiting time to get health services was reported to be less than 30 mints by 99.2% of the study women as shown in table 3 below.

Table 3: Health Service characteristics of pregnant women attending antenatal care at Primary Health Care Centers in Kerbala City (n=400)

Characteristics	Categories	Frequency	%
Travel time to PHCC	10-15 mint	176	44
	15-30 mint	196	49
	More than 30 mint	28	7
Sex of ANC provider	Female	350	87.5
	Male	50	12.5
Adequate Examination done by the doctor	No	61	15.3
	Yes	339	84.7
Waiting time to get service	< 30 min	397	99.2
	≥ 30 min	3	0.8

Regarding the overall satisfaction level of pregnant women, the mean of the 13 questionnaire items used to measure the overall ANC services satisfaction of pregnant women were described in table 4 below.

According to the overall satisfaction level, the results revealed that 87.25% of the pregnant women were satisfied whereas 12.75% were not satisfied (figure 1 below).

Table 4: Means and standard deviations of items used to measure the overall satisfaction of pregnant women at Primary Health Care Centers in Kerbala City (n=400)

Variables	Mean score	SD
Building	3.92	0.88
Facilities in the waiting area	3.91	0.82
Privacy at the examination	4.02	0.32
Communication with the doctor	4.04	0.32
Doctor attitude	4.04	0.33
Response to inquiry	4.04	0.34
Treatment of existing condition	4.03	0.34
Time spends to each patient	4.02	0.30
Health and diet education by the doctor	4.01	0.38
Nurse attitude and communication	3.92	0.53
Type of service give	3.99	0.40
Cost of service	4.05	0.24
Medication & supplement found	3.81	0.67

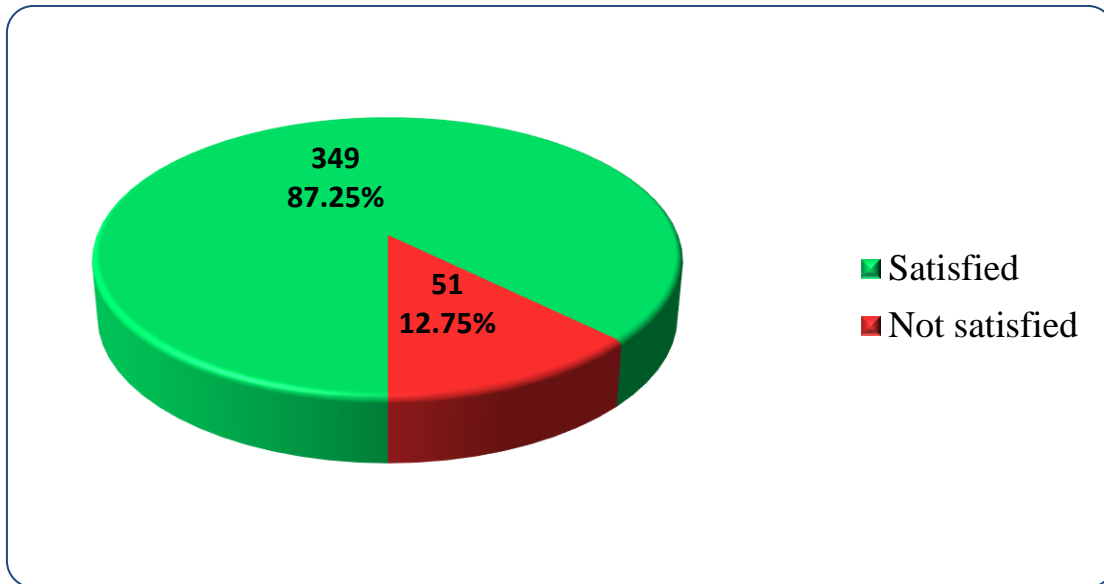


Figure-1: Overall satisfaction Level among pregnant women attending antenatal care at Primary Health Care Centers in Kerbala City (n=400)

In regard to association of the overall satisfaction level with the socio-demographic characteristics of pregnant women, the results concluded that there was highly significant difference in satisfaction level between the four PHCCs ($p < 0.001$), as the lowest satisfaction level was in Al Taf center (58%). Regarding education, pregnant women with college and higher education was significantly the lowest satisfaction level in relation to other educational levels ($p = 0.008$). Also, pregnant women with rural residence were significantly the lowest satisfaction level in relation to urban or slum area ($p < 0.001$) as revealed in table 5 below.

Table 5: Association of health centers and socio-demographic characteristics of pregnant women with the overall satisfaction level (n=400)

Characteristics		Satisfaction level		p-value
		Satisfied	Not satisfied	
PHC	Al Mulhaq	99 (1%)	1 (1%)	<0.001*
	Al Nasir	100 (100%)	0	
	Al Taf	58 (58%)	42 (42%)	
	Al Zahraa	92 (92%)	8 (8%)	
Age	Below 20	69 (90.8%)	7 (9.2%)	0.056
	20-29	170 (83.3%)	34 (16.7%)	
	30 and above	110 (91.7%)	10 (8.3%)	
Education	Illiterate/ Primary school	257 (89.5%)	30 (10.5%)	0.008*
	Secondary school	60 (87%)	9 (13%)	
	college and higher	32 (72.7%)	12 (27.3%)	
Occupation	Housewife	324 (87.3%)	47 (12.7%)	0.756
	employed	8 (80%)	2 (20%)	
	Free work	17 (89.5%)	2 (10.5%)	
Residence	Urban	156 (97.5%)	4 (2.5%)	<0.001*
	Rural	163 (78%)	46 (22%)	
	Slum area	30 (96.8%)	1 (3.2%)	
Monthly income	Poor	78 (90.7%)	8 (9.3%)	0.273
	medium	266 (86.6%)	41 (13.4%)	
	Good	5 (71.4%)	2 (28.6%)	

*Chi-square test was used with a significant p-value of less than 0.05.

Regarding to association of the overall satisfaction level with obstetric and reproductive health profiles of pregnant women, pregnant women with gestation of current pregnancy in second trimester was significantly the lowest satisfaction level in relation to other trimesters ($p=0.047$). Pregnant women with unplanned pregnancy had significantly higher satisfaction than that of planned pregnancy ($p=0.002$) as shown in table 6 below.

Table 6: Association of Obstetric and Reproductive Health profiles of pregnant women with the overall satisfaction level (n=400)

Characteristics		Satisfaction level		P value
		Satisfied	Not satisfied	
Parity of Current pregnancy	G1	59 (88.1%)	8 (11.9%)	0.849
	G2	116 (85.3%)	20 (14.7%)	
	G3	100 (87.7%)	14 (12.3%)	
	G4 and above	74 (89.2%)	9 (10.8%)	
Number of ANC visit	First	151 (89.9%)	17 (10.1%)	0.179
	Repeated visit	198 (85.3%)	34 (14.7%)	
Time of the first visit	First trimester	256 (88.3%)	34 (11.7%)	0.537

	Second trimester	78 (83.9%)	15 (16.1%)	
	Third trimester	15 (88.2%)	2 (11.7%)	
Gestation of current pregnancy	First trimester	107 (92.2%)	9 (7.8%)	0.047*
	Second trimester	169 (83.3%)	34 (16.7%)	
	Third trimester	73 (90.1%)	8 (9.9%)	
Type of pregnancy	Planned pregnancy	188 (82.8%)	39 (17.2%)	0.002*
	Unplanned pregnancy	161 (93.1%)	12 (6.9%)	
History of miscarriage	No	87 (82.9%)	18 (17.1%)	0.116
	Yes	262 (88.8%)	33 (11.2%)	

*Chi-square test was used with a significant P value of less than 0.05.

There were no significant statistical associations of Health service characteristics of pregnant women with the overall satisfaction level as shown in table 7 below.

Table 7: Association of Health service characteristics of pregnant women with the overall satisfaction level(n=400)

Characteristics		Satisfaction level		P value
		Satisfied	Not satisfied	
Travel time to PHCC	10-15 mint	158 (89.8%)	18 (10.2%)	0.180
	More than 15 mint	191 (85.3%)	33 (14.7%)	
Sex of ANC provider	Female	304 (86.9%)	46 (13.1%)	0.533
	Male	45 (90%)	5 (10%)	
Adequate Examination done by the doctor	No	54 (88.5%)	7 (11.5%)	0.746
	Yes	295 (87%)	44 (13%)	
Waiting time to get service	< 30 min	346 (87.2%)	51 (12.8%)	-
	≥ 30 min	3 (100%)	0	

*Chi-square test was used with a significant P value of less than 0.05

Chapter Four

Discussion

Discussion:

The overall satisfaction level result revealed that 87.25% of the pregnant women were satisfied, whereas 12.75% were not satisfied. That means the PHCC services introduced to the pregnant women good service, and Kerbala Health Department put good plan and program for ANC services in PHCC. This result is similar to study done in in Riyadh, Saudi Arabia in 2022 that showed the average satisfaction level with ANC at the PHCC was 76.8% (**Alhaqbani and Bawazir, 2022**). While other studies differ from our study like in Oman (60%)(**Ghobashi and Khandekar, 2008**), southern Ethiopia (32%), (**Tesfaye et al., 2017**), Pakistan (46%)(**Majrooh et al., 2014**), and Uganda (40%) (**Emiru,A.A,ET AL.2020**). The current study showed that about one half of the pregnant women aged between 20 to 29 years. This study along with study done in AL-Amara city in Iraq in 2021 that revealed that the majority of pregnant participating (60.7%) in the study was in age (20-29) years (**Al-Abedi, 2021**). The similarities of the results are due to the fact that, the early age of marriage for most women according to the predominant social customs and traditions. Less than one third of the study participants completed secondary or higher education 28.2%. Regarding education, pregnant women with college and higher education was significantly have the lowest satisfaction level in relation to other educational levels ($p=0.008$). Similar to the result of AL-Amara city, Iraq 2021 that show the secondary or higher education was 28.7% satisfied (**Al-Abedi, 2021**). And this result shows the causes of the high level of satisfaction in the services of PHCC due to high percent of pregnant women 71.8% had low education level and low awareness in the services that should be introduce to them so they satisfy in the less amount of the service. This study in comparison with overall satisfaction in Oman in which about (60%) of participants were have excellent satisfaction but disagree with the education level that show literate 79.5 % of participants (**Emiru et al. 2020**) . While this study

disagrees with a study that done in Saudi Arabia that revealed the literate (78.5%). Regarding the satisfaction level in Saudi Arabia, least satisfaction among patients in the lowest educational category. Those finding suggest there is a different point of view among people with higher education regarding the antenatal services. (**Alhaqbani and Bawazir, 2022**). The majority of the women included in the study (92.7%) were housewife. Similar studies done in Iraq and in Arab countries did not discuss the job of the women attending the PHCC for antenatal visit while a study in Hariri region, Eastern Ethiopia revealed a 66.7% of the women were housewives (**Birhanu et al., 2020**). In Lemi Kura sub city in Ethiopia the house wife was 6.3%, this discrepancy was due to most of the women work as farmer or merchants and those house wife and farmer were likely to be satisfied 5 times more with the given antenatal care services compared with pregnant women who were merchants (**Asres and Amogne, 2023**). Regarding the income, more than three quarters (76.7%) of the women included in the study reported medium monthly income. These results similar to the AL-Amara study in Iraq that show most of the pregnant women (76.1%) have medium income that reflects the same approach in the two cities (**Kerbala and AL-Amara**). These results show why the satisfaction level was high, because most of the pregnant women were visit the PHCC and they satisfied with the service. So, they prefer the PHCC than the hospital or private clinic due to the cost as most of them were housewives and from medium income families, also the education level may play a role as more of them had low education level that mean those with higher income and higher education prefer to go to hospital or private clinics. Rural residence accounted for more than one half of the total 52.25%, slum residence accounted 7.75%, and urban residence accounted 40%. The findings of this study show a significant factor for women's satisfaction with ANC service that was the frequency of ANC visits. In order to compare Pregnant women who had only their

first ANC visit 42% were satisfied, 58% being satisfied with ANC services those who had several visits . This was in agree with findings in Riyadh, Saudi Arabia (Alhaqbani, S.M. and Bawazir, A.A et al. 2022), Nigeria (Sufiyan, M.B., Lawal, S.O. and Suleiman, N et al..2021), and Ethiopia. (Lakew et al., 2018). Multiple visits to PHCC by pregnant women show higher satisfaction rate about the provided services. By repeated visits women developing awareness of its importance, increasing patient needs, and effective response to this need by the healthcare professional, this considers a positive association, Moreover, a satisfied woman is more likely to increase compliance with ANC visit (Alhaqbani, S.M. and Bawazir, A.A et al. 2022). Regarding the health service characteristics of pregnant women, 93% of the study participants reported that the travel time to PHCC was 30 mints or less.Lemi Kura Sub-City, Addis Ababa, Ethiopia(Kebede et al. 2020) 2022 women (66.2%) take more than 30 mints to reach to PHCC. Pregnant women in Lemi Kura were twice as likely to be satisfied with the given antenatal care services they received if their home is far from the health center as if it is close. In contrast to this study, a study conducted in Hosanna, Ethiopia (Kebede et al. 2020), reported that pregnant women were more likely to be satisfied if traveled less than thirty minutes. This might be related with women's preparedness and plan for their antenatal care. In Iraq there is PHCC for each 10,000 people (according to Iraqi ministry of health guidelines), so every woman found PHCC near to her and takes less than 30 mints to reach to it.

Pregnant women with gestation of current pregnancy in second trimester was significantly have the lowest satisfaction level in relation to other trimesters (p=0.047). Like study done in Hariri region, Eastern Ethiopia (Birhanu et al. 2020) that showed pregnant women's satisfaction was 1.74 times higher for women who started their ANC in the first trimester of pregnancy compared with those who had started their ANC after the first trimester of their pregnancy. This

results was in agreement with previous studies in, Ethiopia (**Tesfaye, 2017;Kassaw et al. 2020**) This might be because early initiation of ANC lead to increase pregnant women's chance of having a repeated visit, which influences pregnant women's perception and expectations .Pregnant women with unplanned (43.25%) pregnancy had significantly higher satisfaction than that of planned pregnancy (56.75%) ($p=0.002$). Like a study done in low- and middle-income country which showed the prevalence of unplanned pregnancy among women in low- and middle-income countries was 44.68% (95% CI: 35.16–54.20; $I^2 = 99.7\%$, $P < 0.001$)(**Gelaw et al. 2023**). In Swedish study there were 31% unplanned pregnancies, whereas most woman (69%) reported their pregnancy to be planned. Those women with unplanned pregnancy show high level of satisfaction because they either young age, low income so they not aware in the service of PHCC and satisfied in the simple service they received (**Carlander et al. 2023**) .

First ANC visits accounted for 42% and the 72.5% of these visits was during the first trimester. In comparison with AL-Amara city 34% of the pregnant, the first visit was in the first trimester (**Al-Abedi, 2021**)Regarding the gestation of current pregnancy, first trimester considers important period during the pregnancy because it is when the fetus begins to developed, as a result, some of them attend to health centers for the purpose of monitoring the health status; nutrition; measuring blood sugar; knowing blood pressure, hemoglobin level and other investigations.

In regard to association of the overall satisfaction level with the socio-demographic characteristics of pregnant women, the results concluded that there was highly significant difference in satisfaction level between the four PHCC ($p < 0.001$), i.e., the lowest satisfaction level was in Al Taf center (58%). The building of AL-Taf PHCC was very old and small, lack of investigation, and other facilities in comparison with AL-Zahraa PHCC which was near to it (5 km).

Most of the ANC provider was female (87.5%). Similar to Hariri region, Eastern Ethiopia 76.7% of care provider was female (**Birhanu et al., 2020**).

This fact was due to organization of the PHCC that prefer the female (doctor, staff) in maternal and child health program and also the client prefer female care provider for easy communication between the pregnant women and the care provider. Pregnant women also suggested giving more attention to the primary health care building, more investigation and tools should be available such as ultrasound, also more doctors in different specialist should be found in the PHCC.

Chapter Five

Conclusions and Recommendations

Conclusions:

1. Three quarter of the participant women were satisfied with the general services they received.
2. Our study shows that the majority of the socio demographics and obstetric characteristics of pregnant women were significantly influencing the satisfaction with ANC services.
3. There was highly significant difference in satisfaction level between the four PHCC, the lowest satisfaction was AL-Taf PHCC and the high satisfaction was AL-Mulhaq PHCC.
4. Pregnant women with college and higher education were significantly the lowest satisfaction level in relation to other educational levels.
5. Pregnant women with gestation of current pregnancy in second trimester were significantly the lowest satisfaction level in relation to other trimesters.
6. Pregnant women with unplanned pregnancy had significantly higher satisfaction than that of planned pregnancy.
7. The lowest satisfaction was toward the (building, facilities in the waiting area, and the nurse attitude and communication).

Recommendations:

1. Special attention must be given for increasing experience to improve all components of ANC services in the holly Kerbala city.
2. Care Providers (doctors, staff) must improve their performances and need for avoidance of too much talking between staffs and giving more attention to the clients.
3. First time ANC visitors should be given more attention by providers to increase the chance for a return visit.
4. Update the laboratory by providing new and sufficient investigation, ultrasound which is considering important tool in the PHCC.
5. Focus on the building of the PHCC through construction of new building, pay attention to the waiting area.

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Appendix-I Study questionnaire

- 1) Age
- 2) Educational status
Illetraiate, Primary school, Secondary school, college, higher education
- 3) Partner ' s educational status
Illetraiate, Primary school, Secondary school,college, higher education
- 4) Occupation
Housewife , employed , Free work ,others
- 5) Residence
Urban , rural , slum area
- 6) Monthly income
Good , medium , poor
- 7) Parity of Current pregnancy
G1, G2, G3, G4, more
- 8) Number of ANC visit
First, Two , Three above three
- 9) Time of the First visit
First trimester , Second trimester , third trimester
- 10) Gestation of current pregnancy
First trimester , Second trimester , third trimester
- 11) Type of pregnancy
Planned pregnancy , unplanned pregnancy
- 12) History of miscarriage - yes, no
- 13) Travel time to PHCC
10 – 15 mint , 15 – 30 Mint , More than 30 mint
- 14) Gender of ANC provider
Male , Female

- 15) **Adequate Examination done by the doctor**
Yes , No
- 16) **Waiting time to get service**
< 30 mint , > 30 mint
- 17) **Building**
Strongly not satisfied, not satisfied, not sure, satisfied, strongly satisfied
- 18) **Facilities in the waiting area.**
(Chairs, space , ventilation , crowdnness cleanliness)
strongly not satisfied, not satisfied , not sure, satisfied, strongly satisfied)
- 19) **Privacy at the examination**
strongly not satisfied, not satisfied , not sure, satisfied, very satisfied
- 20) **Communication with the doctor**
strongly not satisfied, not satisfied , not sure, satisfied, very satisfied
- 21) **Doctor attitude**
Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied
- 22) **Response to inquiry**
Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied
- 23) **Treatment of existing condition**
Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied
- 24) **Time spend to each patient**
Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied

25) Health and diet education by the doctor

Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied

26) Nurse attitude and communication

Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied

27) Type of services given (investigation, body weight, vaccine, us)

Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied

28) Cost of service

Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied

29) Medication & supplement found

Strongly not satisfied, not satisfied, not sure , satisfied, very satisfied

30) Any other suggestion.....

.....
.....
.....

١. العمر.....
٢. التحصيل الدراسي
(غير متعلم - تحصيل ابتدائي - تحصيل ثانوي - بكالوريوس - تعليم عالي)
٣. التحصيل الدراسي للزوج
(غير متعلم - تحصيل ابتدائي - تحصيل ثانوي - بكالوريوس - تعليم عالي)
٤. الوظيفة
(ربه بيت - موظفه - عمل حر - أخرى)
٥. السكن
(المدينه - الريف - العشوائيات)
٦. الدخل الشهري
(جيد - متوسط - ضعيف)
٧. عدد مرات الحمل
(مره - اثنان - ثلاثه - اربعه - اكثر)
٨. عدد مرات زياره المركز الصحي
(أولى - ثانيه - ثلاث او اكثر)
٩. وقت الزياره الاولى للمركز الصحي
(الثلث الأول - الثلث الثاني - الثلث الثالث)
١٠. عمر الحمل الحالي
(الثلث الأول - الثلث الثاني - الثلث الثالث)

١١. نوع الحمل

(مخطط له - غير مخطط له)

١٢. هل هناك اسقاط حمل سابق

(نعم - لا)

١٣. الوقت المستغرق للوصول للمركز الصحي

(10 – 15 mint , 15 – 30 Mint , More than 30 mint)

١٤. جنس مقدم الخدمه الصحيه

(ذكر - انثى)

١٥. الفحص الكافي من قبل مقدم الرعايه الصحيه الاولييه

(نعم - لا)

١٦. وقت الانتظار للحصول على الخدمه الصحيه

(اكثر من 30 دقيقه - اقل من 30 دقيقه)

١٧. البنايه

(لا اوافق بشده - لا اوافق - محايد - اوافق - اوافق بشده)

١٨. الوسائل في منطقه الانتظار

(الازدحام ، النظافه , التهويه , مكان واسع , الكراسي).

لا اوافق بشده - لا اوافق - محايد - اوافق - اوافق بشده

١٩. الخصوصيه اثناء الفحص

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٠. التواصل مع الطبيب

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢١. اخلاق الطبيب

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٢. الاستجابيه لتساولات المريض

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٣. معالجه المرض الحالي

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٤. الوقت المخصص لكل مريض

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٥. التثقيف التغذوي والصحي للمريض

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٦. اخلاق وتعامل الكوادر التمريضه

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٧. نوع الخدمه المقدمه

(تحاليل - قياس الوزن - تلقيحات - فحص السونار)

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٨ . تكلفه الخدمات

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٢٩ . توفر العلاجات و المقويات

(لا اوافق بشده -لا اوافق - محايد - اوافق - اوافق بشده)

٣٠اقتراحات اخرى

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Appendix-II Documents

جمهورية العراق

وزارة التعليم العالي والبحث العلمي
جامعة كربلاء
كلية الطب
معاون العميد للشؤون العلمية
شعبة الدراسات العليا

العدد: 161 / 1974

التاريخ: 2023 / 6 / 11

الى / دائرة صحة كربلاء المقدسة / قطاع المركز / قطاع الحسينية
م / تسهيل مهمة جامعة كربلاء - كلية الطب

تحية طيبة:

الصادر

يرجى تفضلكم بتسهيل مهمة طالبة الدراسات العليا / دبلوم
عالي / طب اسرة (مينا منير صاحب) في مشروع البحث الموسوم:

Assessment of the Satisfaction of Pregnant Women about Antenatal Care
Services in Primary Health Care Centers in Karbala 2023

لغرض اكمال متطلبات البحث، شاكرين تعاونكم معنا خدمة
للحركة العلمية في بلدنا العزيز

... مع التقدير ...

أ.م.د. علي عبد الرضا أبو طحين
معاون العميد للشؤون العلمية
2023/6/11

**نسخة منه:

- مكتب السيد العميد المحترم للتفضل بالاطلاع مع التقدير.
- مكتب معاون العميد للشؤون العلمية المحترم للتفضل بالاطلاع مع التقدير.
- فرع طب الاسرة والمجتمع. للتفضل بالاطلاع مع التقدير.
- شعبة الدراسات العليا/الحفظ.
- الصادرة.



جامعة كربلاء
كلية الطب
فرع طب الأسرة المجتمع

إلى / الاستاذ الدكتور علي عبد الرضا أبو طحين المحترم

م/ تقييم استبانة

تحية طبية

نظرا للمكانة العلمية والخبرة التي تتمتعون بها نرفق لكم استبانة مقترحة لرسالة طالبة
الدبلوم العالي في طب الأسرة د. مينا منير صاحب المبين عنوانها في ادناه، راجين من جنابكم
الاطلاع عليها واعطاء ملاحظاتكم القيمة بشأنها ... مع فائق التقدير

**" Satisfaction of pregnant women about antenatal care service in
primary health care centres in karbela city 2023"**

أ.م. د
بشير عقيل العلي
2023 / 6 / 11

الاستاذ المساعد الدكتور
بشير عقيل العلي
معاون العميد لشؤون الادارية

الملاحظات:

- تنظيم الاستبيان بالفترة - لرب
- امانة مقدره - لكونت مع احضان البيت
- ملاحظا - اخرها اشرف عنها الاستبيان



علي محمد الرضا ابو طحين
مستشار القصيد

٦ / ١٨

University of Kerbala
College of Medicine
Medical Research Bioethical Committee
No: 23-4
Date: 3/1/2023



FINAL APPROVAL LETTER

Mena Muneer Sahib
Department of Family and Community Medicine \ College of Medicine \
University of Kerbala

Title of Project:

"Satisfaction of pregnant women about antenatal care services in primary health care in kerbala city"

This is to certify that proposal provided have satisfactorily addressed the research bioethical guidelines.

Please consider the following requirements of approval:

1. Approval will be valid for one year. By the end of this period, if the project has been completed, abandoned, discontinued or not commenced for any reason, you are required to announce to the Committee. And you should inform the committee if the study extends over one year.
2. Please remember the Committee must be notified of any alteration to the project.
3. You must notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that might affect continued ethical acceptability of the project.
4. Always consider the confidentiality of participants' information and/or opinions. And they must never be obligated to participate in the study and can withdraw at any time.
5. At all times you are responsible for the ethical conduct of your research in accordance with the standard bioethical guidelines.
6. The Committee should be notified if you will be applying for or have applied for internal or external funding for the above project.
7. This document does not compensate administrative or ethical approval might be required from hospitals or other authorities.

Assoc. Professor Ali A. Abutiheen
Chair, Medical Research Bioethical Committee
College of Medicine -- University of Kerbala

الخلاصة :

مراجعته الرعاية الصحية للحامل اثناء فترة الحمل له تأثير ايجابي على استخدام خدمات الرعاية الصحية بعد الولادة ونقطه دخول مهمه لاقتناع الامهات الحوامل بالفوائد الصحية للولادة تحت الاشراف الطبي. ومع ذلك، فان استخدام المرأة الحامل لخدمات الرعاية الصحية يمكن ان يؤثر على مستوى رضاها بالخدمات المقدمة لها من خلال المراكز الصحية. ان استخدام المرأة الحامل لخدمات الرعاية في المراكز الصحية يعتمد على نوعيه الخدمات المقدمة لها، حيث ان الحوامل الغير راضيات عن الخدمات هن على الاغلب لا يستمرن مع العلاج او يبحثن عن خدمات اخرى في اماكن اخرى. بينما الحوامل الراضيات عن الخدمات هن من يستمرن في المراجعة واستعمال الخدمات الصحية ويكونون على علاقه جيده مع مقدمي الرعاية في تلك المراكز.

طريقه البحث:

اجريت الدراسه في الفتره من يناير الى اكتوبر 2023 لتقييم رضا النساء الحوامل عن خدمات الرعاية الصحية المقدمه للمرأة الحامل في مدينه كربلاء المقدسه. حيث تكونت العينه من (400) امراه تم اختيارها عشوائيا من (4) مراكز صحيه اوليه تقدم خدمات الرعاية الصحية يوميا للحوامل، وقد تم تصميم الاستبيان بالاعتماد على دراسات سابقه لقياس خدمات الرعاية الصحية الاوليه من خلال النساء الحوامل اللاتي يزرن مراكز الرعاية الصحية الاوليه.

النتائج:

وفقا لمستوى الرضا العام، اظهرت النتائج ان 87.25% من النساء الحوامل راضيات عن الخدمات المقدمه لهن، في حين ان 12.75% غير راضيات عن الخدمات. فيما يتعلق بارتباط مستوى الرضا العام بالخصائص الاجتماعيه والديموغرافيه للنساء الحوامل، اشارت النتائج الى وجود اختلاف كبير جدا في مراكز الرعاية الصحية الأولية الأربعة. وفيما يتعلق بالتعليم كانت النساء الحوامل الحاصلات على التعليم الجامعي والتعليم العالي أدنى مستوى رضا بشكل ملحوظ مقارنة بالمستويات التعليمية الأخرى (قيمة الاحتمال = 0.008). كما أن النساء الحوامل اللاتي يقيمن في الريف كان لديهن أدنى مستوى رضا بشكل ملحوظ مقارنة بالمناطق الحضرية أو العشوائية.

الاستنتاج:

أكثر من ثلثي النساء الحوامل راضيات عن خدمة الرعاية السابقة للولادة. نوع الوجهه الصحية، والحالة التعليمية، وعدد ووقت بدء الزيارة خدمات الرعاية الصحية الاوليه، وتاريخ الإجهاض، ووقت الانتظار

للحصول على الخدمة، والتواصل مع الطبيب والموظفين، والتحليل المتوفره، والتكلفة، والأدوية والمكملات الغذائية الموجوده، والتثقيف الصحي والنظام الغذائي. وهذه العوامل مرتبطة برضى النساء الحوامل عن خدمات الرعاية الصحية المقدمه لهن من خلال مراكز الرعاية الصحية الاوليّه

جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة كربلاء
كلية الطب



رضى النساء الحوامل عن خدمات الرعاية الصحية الاولى المقدمة لها من قبل المراكز
الصحية الاولى في محافظة كربلاء المقدسة, 2023

قدمت من قبل
مينا منير صاحب ال طعمة

اشراف

الدكتور

فريد عباس حسين
اختصاص طب الاسره

الدكتور

بشير عقيل العلي
اختصاص طب المجتمع