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Satisfaction Of Women Attending The Antenatal Care Clinics For Provision Of Services And Health Care Utilization Among Samples Of Primary Health Care Centers In Baghdad-Al Karkh District

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Abstract:
Background*: The quality of care provided to the women and infants is a key determinant in maternal outcome and that simple change in practice can save many lives.****Aims:*** *To identify the satisfaction of clients regarding quality improvement of antenatal services in primary health care centers within the Al-Karkh district of Baghdad.****Method****: This study across sectional design study was conducted from October 2024 to May2025 which include six primary health care centers (3 family health care center and, 3 primary health care center) and four in the outskirts (1 family health, 3 primary care), and the total number of clients required during the study period was 500 (350 pregnant,150mother) attending antenatal and postnatal care in primary health care centers, direct face-to-face interviews with all participant recruitment, structured -questionnaire forms were designed to estimate client satisfaction toward health care services during their antennal care visits.****Results****: About 82% of pregnant women with age group (18-35 years). Satisfaction with attendance about waiting time <30 minutes account 229 (46%), Waiting Place Adequacy (Seating)Satisfied: 263 (53%), Respect and Communication with Health care Providers 380 (76%) Satisfied, 385 (77%) of clients are satisfied about always availability of Medical Staff During Visit.****Conclusion:*** *The study highlights both strengths and critical gaps in maternal healthcare service and the importance of continuous assessment and evaluated the ANC and PNC to develop an immediate plan at the level of health departments and submitted to decision-makers in the Ministry of Health.*
Key words: *Antenatal care, Postnatal care, Primary health care centers.*

INTRODUCTION:

Antenatal care (ANC) is a care that could be provided to pregnant women by health professionals to uphold and maintain optimal health of women through pregnancy, labor, and puerperium period (Chicumbe, S. and Martins, M.D.R.O., 2022), ANC helps to provide basic preventive and therapeutic care, raise awareness on maternal danger signs, orient to birth preparedness, and improve health-seeking behavior of women (WHO, 2016).WHO define ANC as "the care provided by skilled health care professional to pregnant women in order to ensure the best health condition for mother and baby during pregnancy (WHO, 2023). (WHO) defines client satisfaction in primary health care (PHC) as a crucial determinant of health service utilization. It encompasses both the technical quality of care, as traditionally assessed by health professionals (e.g., clinical management, availability of medications), and the interpersonal aspects perceived by the community (e.g., waiting times, provider interactions) (Hedayati-Moghaddam et al., 2022). This multidimensional approach reflects client judgments about whether their expectations have been met and is influenced by various factors, including the availability of trained personnel, staff attitudes, waiting times, and the quality of facilities and services. Incorporating client satisfaction into health system evaluations allows for the identification of areas needing improvement and supports the development of strategies to enhance service delivery, ultimately contributing to better health outcomes and increased utilization of PHC services (Jibril et al., 2024).In Iraq, although first antenatal contact is 88% and postnatal health check for the mother is 83%, still pregnant having four or more ANC contact is 68% and eight antenatal contact is 22% (MICS 6 2018) (Al-Fathy, Barhawi and Al-Rawee, 2023).

Statement of the problem:

Women die as a result of complications during and following pregnancy and childbirth. Most of these complications develop during pregnancy. Other complications may exist before pregnancy but are worsened during pregnancy. Abortion, obstetric complications such as hemorrhage, dystocia, eclampsia, sepsis and infections such as tuberculosis and HIV are the major causes of maternal deaths in developing countries (Elneil, et al., 2025), similarly, it has a role to achieve health service goal that aimed at dropping maternal death, as evidences show that maternal death is high in countries where ANC coverage is low and where it has poor quality (Wenling et al., 2024), Inadequate antenatal care, defined as starting after the 12th week of pregnancy or having fewer than the recommended number of visits, has significant consequences for the health of mothers, fetuses, and newborns (Alqifari, S.F.,2024). lastly improving client satisfaction associated with higher utilization rate to health services and better health outcome.

Specific objectives:

1-Determine the socio-demographic characteristics of study sample

2-Estimate level of satisfaction of women attending PHCs during antenatal visit regarding the health care services.

Subjects and Methods:

Study was conducted from October 2024 to May2025 with direct face-to-face interviews with all participant recruitment and10 PHCCs were randomly selected from Baghdad /Al-Karkh health directorate (DOH) using cluster multistage of random sampling technique, using cluster multi-stage of random sampling technique, study population will be all women attending the enrolled the PHCCs whose client of antenatal and postnatal service, caregivers: working staff and provision process by the staff working in the health center: (director, medical staff and health staff), during periods when the researcher was scheduled for duty at the care facilities and the provider of services, the administrator at each PHCC was contacted in order to obtain information concerning the number of women that attended the PHCC, and to seek permission to conduct the study at the work site. A quiet place was chosen for the interviews.

Eligibility criteria: Inclusion criteria: selection of the client in the study should met the following criteria:

a. pregnant or mother (within six weeks after delivery)

b. clients are living within the boundaries of the study location.

Exclusion criteria: pregnant and mother visit the facilities but not living within the boundaries of the study location are Health givers in selecting health centers.

ANC service provided through six days / week from 8.00 AM-2.00 PM. Every health facility was visited weekly through the work time hours; in each visit, 3-5 of caregivers and 10-15 clients were interviewed, every interview lasts about 15 minutes. These PHCCs are existing in areas which differ in their socio-economic status, across sectional design attendance was chosen by systematic random sample through estimating the daily visitors and collect the sample required.

Sample size determination and sampling procedures:

The sample size for this study was determined using the following formula (Charan and Biswas, 2013):

$$N = \frac{Z\ 2\alpha/2\ P\ (1\text{-}P)}{d2}$$

N = intended sample size; Z= value of standard normal distribution (Z =1.96); p= the of pregnant women goal

d = margin of error with confidence interval of 95% = 0.05.

A minimum sample size of This calculation was 391client, the minimum sample size adjusted through multiplying it by 1.3 to take account of the calculator effect resulting a sample size of 442, Finally the sample size was 500.

Data collection Tools: Self-administered questionnaire form was collected by the researcher by structured direct interview questionnaire, the questionnaire will be filled by the researcher through direct interview with each participant.

Statistical Data Analysis: The data was coded and each questionnaire form assigned with a serial identifying number then entered by the researcher into the computer and then the data collection will be analyzed using Statistical Package for Social Science, Version 26 (SPSS program, V.26).

RESULT OF THE STUDY:

The study enrolled 500 samples have collected, including 370 prenatal samples (145 from family health centers, 225 from primary health care centers) 130 postnatal samples were collected (55 from family health centers, 75 from primary health care centers) from 10 primary health care center in Al-Karkh district.

Socio-demographic characteristics of clients: The socio-demographic characteristics of the 500 surveyed mothers (370 antenatal and 130 postnatal clients) are detailed in Table 1. The majority of respondents, 410 women (82%), were between the ages of 18 and 35 years, while 25 (5%) were younger than 18, and 65 (13%) were above 35 years. Regarding educational background, most mothers had attained at least some level of formal education. A significant proportion, 182 (36%), held a diploma from an institute, followed by 140 (28%) with secondary education, and 98 (20%) with university degrees. A smaller number had only primary education (67; 13%) or no formal education at all (13; 3%). In terms of employment status, 222 (45%) of the mothers were employed, whereas the majority, 276 (55%), were not employed. Concerning their place of residence, a greater portion of the clients, 342 (68%), resided in urban areas, while 158 (32%) lived in rural settings.

Table (1) Socio-demographic characteristics of mothers.		**Count**	%
Age group	<18	25	5%
	18-35y	410	82%
	>35y	65	13%
Education level	No formal education	13	3%
	Primary	67	13%
	Secondary	140	28%
	diploma(institute)	182	36%
	University	98	20%
Employment status	Employed	222	45%
	non-employed	276	55%
Residence	Urban	342	68%
	Rural	158	32%

Client Satisfaction of service: The analysis of client satisfaction among 500 individuals regarding primary health care (PHC) services reveals varying levels of contentment across several service areas (table 2). A majority of clients (300; 60%) received general PHC services, while the remaining 200 (40%) utilized family-specific PHC services. When it came to waiting time, 229 participants (46%) were satisfied with waits under 30 minutes, whereas 271 (54%) were dissatisfied due to longer delays. Regarding the adequacy of the waiting area, 263 clients (53%) expressed satisfaction, 78 (16%) remained neutral, and 159 (32%) were dissatisfied.

In terms of health education provided (covering topics such as nutrition and exercise), satisfaction was noted among 197 clients (39%), while 155 (31%) were neutral and 148 (30%) dissatisfied. The level of respect and communication with health providers was a notable strength, with 380 respondents (76%) satisfied, 110 (22%) neutral, and only 10 (2%) dissatisfied. Availability of medical staff during visits was also rated positively, with 385 clients (77%) reporting that staff were always available, 101 (20%) indicating occasional presence, and just 14 (3%) stating that staff were never available. The availability of essential medicines like iron and folic acid was met with high satisfaction—445 respondents (89%) were satisfied, 36 (7%) neutral, and only 19 (4%) dissatisfied. Accessibility to PHC centers showed that 67 individuals (13%) found them very easy to reach on foot within 5–10 minutes, while 239 (48%) accessed them easily within a short drive. Meanwhile, 110 (22%) described access as neutral, 81 (16%) found it difficult, and only 2 (0.4%) experienced very difficult access. Cleanliness of PHC facilities showed mixed responses: 198 (40%) were satisfied, 225 (45%) neutral, and 77 (15%) dissatisfied.

Table (2) Client Satisfaction of services		**Count**	%
Servies PHC	services of primary health care	300	60%
	services of PHC family	200	40%
Satisfaction with waiting time	<30 min- satisfied	229	46%
	>=30 min dissatisfied	271	54%
Waiting place adequate with seat	Satisfied	263	53%
	Neutral	78	16%
	Dissatisfied	159	32%
Health Education Provided Nutrition Exercise	Satisfied	197	39%
	Neutral	155	31%
		148	30%
Respect and communication with health providers	Satisfied	380	76%
	Neutral	110	22%
	Dissatisfied	10	2%
Availability Medical Staff During Visit	Always	385	77%
	Sometime	101	20%
	Never	14	3%
Satisfaction with availability of medicine Iron, Folic acid	Satisfied	445	89%
	Neutral	36	7%
	Dissatisfied	19	4%
Accessibility of PHC location, transportation	very easy-5-10 min by foot	67	13%
	Easy< 5km (5-10 min by car	239	48%
	Neutral 5-15 km (10-30 min by car)	110	22%
	Difficult 15-30 km (30 min to 1 hour by car)	81	16%
	very Difficult>30 km (>1 hour by car)	2	0%
Cleanliness of PHC facility during visits	Satisfied	198	40%
	Neutral	225	45%
	Dissatisfied	77	15%

DISCUSSION:

In the current study we find that the demographic profile highlights key areas for targeted intervention, with 82% of participants aged 18–35, the data is toward a younger population, suggesting that trends in service use may reflect the needs of this age group. However, the 13% over

age 35 and 5% under age 18 represent at-risk populations requiring specialized counseling and monitoring due to increased risks of pregnancy complications and poor birth outcomes, on other hand in terms of education, most individuals have at least a secondary education, and only 3% are without formal education, indicating relatively low illiteracy rates. However, those with low education levels remain vulnerable to missing key health messages, and strategies to address health literacy should still be prioritized, A cross-sectional study in Mansoura district found that 79.8% of pregnant women had limited health literacy, with 34.5% categorized as insufficient and 45.3% as problematic. Factors contributing to limited health literacy included unsatisfactory income, lower education levels, and unplanned pregnancies (Essam et al., 2022) Both studies highlight the importance of education in health literacy. The study shows a nearly equal split between employed and non-employed individuals, with more than half not employed, which may include homemakers and students, this has implications for economic vulnerability and access to care, especially for those without financial independence, also the urban–rural distribution reveals that 68% of participants live in urban areas, where healthcare access tends to be better. However, the 32% living in rural areas may face access barriers and are often underserved. Targeted outreach and service delivery efforts are needed in these areas, in summary, rural, unemployed, and low-educated mothers represent the most vulnerable groups with potential gaps in accessing and benefiting from maternal health services. Likewise, older mothers (35+) and adolescents (<18) require tailored risk counseling to ensure their unique needs are addressed effectively, study analyzing the 2019 Ethiopian Demographic and Health Survey found that urban women had higher utilization rates of antenatal care (84.9% vs. 70.8%) and institutional delivery (73% vs. 44%) compared to rural women. Educational attainment was a significant factor; higher education levels were associated with increased utilization of maternal health services (Arefaynie et al., 2024).The higher satisfaction rate in Family PHC is likely due to a combination of continuity of care, personalized interactions and organizational structure, which refer to availability of medical and health staff in Family PHC and this will providing the service smoothly without delay, the availability of medical staff in Family Primary Health Care (PHC) centers is a critical factor influencing clients satisfaction and care quality, research indicates that Family PHC centers often have more consistent staffing levels compared to general PHCs, which can lead to better clients experiences, a study conducted in Basra, Iraq, found that general non-family medicine PHC centers had a higher number of families per doctor, ranging from 916 to 2,655, exceeding the Iraqi Ministry of Health standards. In contrast, family medicine centers had fewer families per doctor, with daily patient loads of 24 to 30, aligning more closely with recommended staffing levels, additionally, these centers reported better availability of essential facilities, such as doctor's rooms and nursing rooms, compared to non-family medicine centers (Hussein et al., 2017), also in our study show more than half of clients in Family PHC expressed satisfaction with waiting times, compared to only 32% in general PHC. More than half of clients were dissatisfied with waiting times (≥30 minutes), this long waiting times are a common barrier to healthcare access in many settings, contributing to missed appointments and reduced patient satisfaction, this result similar to study done in Nigeria (Abdus-Salam et al., 2021), also the study suggests inconsistent or inadequate counseling health education which is critical for preventing complications like anemia and gestational diabetes (Lassi et al., 2020), with more than two third satisfied with provider-patient relationships the same results apply to the findings reported consistent medical staff availability, while only 20% faced occasional shortages, which can disrupt care continuity and increase waiting times (World Health Organization, 2., 2016).

Staff shortages are a critical barrier in many health systems, particularly in low-resource settings, where workforce gaps exacerbate delays in antenatal and postnatal services, regarding Accessibility nearly half of clients found PHCs easily accessible (<5 km), but 16% traveled 15–30 km, highlighting disparities in geographic access. Such distances can delay timely care, particularly for emergency obstetric services, a study in Ethiopia (2020) found that mothers who spent less than or equal to 30 minutes reaching a health facility were 1.72 times more likely to give birth in a healthcare facility compared to those who spent more than 30 minute on other hand less than half expressed (Zenbaba et

al., 2021)satisfaction on cleanliness signaling gaps in facility hygiene, poor sanitation increases infection risks for mothers and newborns.

CONCLUSIONS

1.The study highlights both strengths and critical gaps in maternal healthcare services that client satisfaction with PHC services showed generally positive trends, particularly in communication with health providers, staff availability, and medicine access. However, concerns remain regarding waiting times, health education, and facility cleanliness, indicating key areas for improvement to enhance overall service quality.

2.The study targeted interventions such as improved staffing, infrastructure upgrades, enhanced training, and client-counseling are needed to address these gaps.

3.Weakness or critical gaps in outreach for rural, low-educated, and high-risk mothers (adolescents and older women) is crucial.

Recommendations:

1. Emphasis on the ministry of health to establish an education-awareness program about the importance 0f continuity of care and Increase emphasis on postnatal care education before delivery.

2.Identify weaknesses in primary health care centers and service providers, and an immediate plan is developed at the level of health departments and submitted to decision-makers in the Ministry of Health.

Ethical Approval

According to the Declaration of Helsinki (WMA, 2022) this study was conducted therefore prior to data collection, an official permission was obtained from al-Karkh health directorate and managers of PHCCs to facilitate data collection from PHCCs.

- The study protocol was reviewed and ethical clearance with initial approval and official permission to conduct the study have been obtained by the Scientific and Ethical Committee in the Department of Family and Community Medicine/College of Medicine/Al-Iraqia University.
- An official permission for data collection was obtained from The Iraqi Ministry of Health/ Baghdad/Al-Karkh Health Directorate which gave us authorization before the study could be carried out with order.
- An official permission was obtained from the health sector and managers of PHCCs before interviewing and data collecting according to the questionnaire information to the participant.
- Informal verbal consent with each participant regarding the aim of this study was obtained before data collection.
- After ensuring the guarantee of data confidentiality and explanation the study purpose to the participant therefore the participant was made aware of the voluntary nature of the process, their right to withdraw at any moment and informed that all personal information used for sake of this study were kept confidential; they would not be identified by name but by an identification by codes only.

Conflicts of Interest: The authors declare that he has no competing interests.

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