Women's Expectations and Satisfaction with the Quality of Antenatal Care at the Primary Health Care Centers in Unaizah City

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Abstract

Background: Antenatal care (ANC) is an aspect of preventive medicine that aims to promote maternal and fetal health. The quality of ANC has a great impact on the pregnancy experience and outcome.

Aim: The aim of this study is to assess women's expectations and satisfaction with the quality of ANC provided at primary health care centers (PHCCs) in Unaizah city, Qassim region, Saudi Arabia.

Methods: A cross-sectional survey was conducted among women seeking ANC at PHCCs in Unaizah city, during 2021. Two-stage cluster sampling method was used for selection of participants from 5 randomly selected PHCCs. Data were collected by self-administered questionnaire and SPSS software was used for analyzing data.

Results: A total of 204 women participated in the survey; 54.5% were 30 years or less in age and 50.5% had university or higher degree. The majority of women were satisfied regarding overall information received (n=189, 92.7%), care received from physicians (n=201, 98.5%) and general quality of the health care provided (n=189, 92.7%). However, 22.5% of the participants were dissatisfied with waiting time at the clinic and 32.3% either did not receive any instructions or thought that the instructions were insufficient regarding danger signs and seeking emergency care during pregnancy. Out of a total 15 score for adequacy of information, the mean score for 31-50 years women was 12.37±3.24 while it was 10.63±4.02 for 18-30 years age group (p=0.001). The pregnancy number (p=0.015) and the number of children (p=0.001) were also statistically significantly associated with perceived adequacy of information received during ANC visit.

Conclusions: The overall satisfaction with the quality of ANC was high. However, a few aspects of services need improvement including waiting time and the instructions about danger signs and seeking emergency care. Regular satisfaction surveys should be carried out to identify problem areas and to improve the quality of services.

Key words: antenatal care, expectations, satisfaction, primary health care centers, Unaizah, Saudi Arabia

Introduction

Globally, 295,000 maternal deaths were reported in 2017. Although the number of deaths has declined from 451,000 in the year 2000 yet over 800 women are dying each day from complications of pregnancy and childbirth. For every woman who dies, approximately 20 others suffer from serious health problems and disabilities [1]. Saudi Arabia had a Maternal Mortality Rate (MMR) of 24 in 100,000 live births in 2008. While this rate has decreased to 11.9 per 100,000 in 2018, variation between regions is seen with mortality rates highest in rural and poorer regions. The noticeable decrease in MMR reflects the country's efforts for achieving the target of 75% reduction in MMR by 2030, as outlined by the millennium development goals [2].

Antenatal care (ANC), also known as prenatal care is considered one aspect of preventive medicine which is comprehensive medical care provided to pregnant women by skilled health care professionals. It consists of health education, counseling, testing, treatment as well as promotion of maternal and fetal well-being [3]. It is estimated that ANC alone can reduce maternal mortality by 20% with good quality and regular care [4].

Primary health care provides the entry point into the healthcare delivery system of the country and thus represents an ideal setting for prevention of pregnancy complications by detecting high risk patients and by providing early intervention and referral in case of emergency, leading to better pregnancy outcomes.

Patient satisfaction has traditionally been linked to the quality of provided services and the extent to which specific needs are met. Satisfied patients are likely to come back for the services and recommend services to others [5]. Various studies in different parts of the world demonstrate that maternal satisfaction with ANC is affected by health care provider attitudes, quality of service provided, adequacy of information provided, sociodemographics of participants, type of pregnancy and history of still birth, social and cultural norms as well as patients' previous experience [6].

World Health Organization (WHO) emphasizes patient satisfaction as a secondary prevention of maternal mortality. The purpose of evaluating patient satisfaction is firstly to understand patient experiences and response to health care; and secondly to measure the quality of care received and identify problem areas [7].

Women's satisfaction with antenatal care can be determined by the interaction between their expectations and the characteristics of the health care they receive [8]. Expectations for prenatal care of pregnant women can be divided into four main categories: desire for adequate information, emotional support, general advocacy support, and desire for professional care [9].

In spite of the increasing importance of quality of antenatal care worldwide, detailed information about the quality or effectiveness of ANC practices is less often investigated in many of the populations where they are most needed [10]. In Saudi Arabia, there is a dearth of literature regarding quality of ANC. To bridge this gap, we designed the current study with the objectives to determine the satisfaction level of pregnant women seeking ANC at PHCCs in Unaizah city, to explore their expectation, to assess the perceived quality of antenatal care and to identify association of sociodemographic factors with the level of expectations and satisfaction of pregnant women seeking ANC at PHCCs in Unaizah city.

Materials and Methods

1. Study Design, Setting and Study Population

It was a cross-sectional study, conducted at primary health care centers (PHCCs) in Unaizah City. Unaizah is the second largest city in Qassim province with a population of 163,729 persons. In 2020, a total of 2,390 PHCCs were distributed all over the Kingdom of Saudi Arabia. There are 16 PHCCs in Unaizah City. Basically, the PHCCs focus on preventive and curative primary care services such as health promotion and education, environmental hygiene, maternity and childcare, vaccinations, diagnosis and treatment of common diseases and providing drug supplies as well as protecting the community against contagious and endemic diseases [11].

Saudi pregnant women seeking antenatal care services at PHCCs in Unaizah, were included in this study. Women physically handicapped or having mental health conditions were excluded from the study.

2. Sampling Procedure and Data Collection

Two-stage cluster sampling method was used. In the first stage, 5 PHCCs out of the total 16 were randomly selected by using Microsoft Excel software. In the second stage, 40 women were selected from each center. All women attending antenatal clinics were invited to participate in the study till completion of sample size from that centre. After their exit from the clinic, women were invited to participate in the study by the physicians (general practitioner or family physician) at the end of the consultation. Data was collected by the first author and the physicians at the PHCCs. The physicians were trained for data collection. Data collectors explained the aims of the study and gave the patient the opportunity to ask any questions about the survey or the questionnaire. The illiterate women were interviewed by the data collector. The survey was conducted from December 2020 to June 2021.

3. Study Questionnaire

A semi-structured self-administered questionnaire was used. The questionnaire was adapted from the validated and standardized questionnaire developed by World Health Organization for the assessment of perceived quality of antenatal care services [12]. Scale of expectations and satisfactions were adapted from a validated questionnaire used in the study conducted to determine expectations and satisfaction of women with antenatal care [8]. The questionnaire was modified according to local requirements. It consisted of four parts. The first part collected information about sociodemographic data and obstetrical history such

as age, level of education, occupation, family income, gestational age, and number of children. The second part included questions about perceived quality of ANC such as waiting time, consultation time, and relevant information received. There were five statements for assessing perceived adequacy of information. Each statement had four options including no information received, not enough, as much as wanted and too much information. The third part comprised questions about women's expectations regarding same doctor preference, waiting time, and number of antenatal visits. The options provided for expectation response included less than expected, same as expected and more than expected. The fourth part gathered information about satisfaction level which included statements to be rated on 5-point Likert scale, ranging from strongly disagree to strongly agree. Moreover, there were questions about further visits to the clinic and recommendation of the clinic to others. Finally, suggestions for improvement of services were obtained from the participants. Pilot study was done to test the clarity and understandability of the questionnaire.

4. Statistical Analysis

Data was entered and analyzed using Statistical Package for Social Science (SPSS) program version 23. Descriptive statistics were calculated as frequencies and percentages for categorical variables, and mean and standard deviation for numerical variables. Chi square, t test and ANOVA were used for inferential statistics. The results with p value ≤0.05 were considered statistically significant.

Total information adequacy scores were calculated by assigning 0 to 'no information received' response; 1 to 'not enough'; 2 to 'too much information', and 3 to 'as much as wanted'. There were five statements regarding adequacy of information leading to a total possible score of 15 (5 items *3 score), with a minimum of 0 and a maximum of 15 score. The total information adequacy score was categorized into adequate (0 to 8 score) and inadequate (9 to 15 scores).

A five-point Likert scale was used for assessing the level of satisfaction. One score was assigned to 'strongly disagree' response while five score to 'strongly agree' response. There were seven satisfaction statements leading to total possible score for satisfaction as 35 (7 items *5 score), with a minimum of 7 and a maximum of 35 score. The level of satisfaction was categorized into low (7-21 score), medium (22-27 score) and high (28-35 score).

5. Ethical consideration

Ethical approval of study was taken from Qassim Regional Research Ethics Committee. Permission was obtained from administrative authorities, and before distributing the questionnaire, permission was taken from each PHCC Director. Informed consent was obtained from all study participants, and confidentiality and privacy were maintained at all levels.

Results

1. Survey Response rate

Out of 220 women invited for survey participation, 204 consented to participate in the study, leading to a response rate of 92.7%.

2. Sociodemographic characteristics of the Participants

More than half (54.5%) of the women were 30 years old or less. A total of 103 (50.5%) women had educational level of university or higher. The majority (80%) were housewives, and 55.9% of the participants had family income of 5000-10,000 Saudi Riyals. Regarding obstetric and reproductive health profile, about half (48%) of women had given birth to one to three children while 55 (27%) women were experiencing their first pregnancy (Table 1).

3. Adequacy of Information

Table 2 shows responses of the participants regarding adequacy of information given to the women on different aspects of their health during pregnancy. Regarding information given about medication needed or avoided during pregnancy, the majority of women (82.4%) responded that they received information as much as they wanted. However, more than one-third (36.3%) of the women either did not receive information about breast feeding or they believed it was not enough. With regards to family planning and contraception, 42.2% of women either did not receive any information or they thought it was not enough.

Table 1: Socio-demographic characteristics of study participants (n=204)

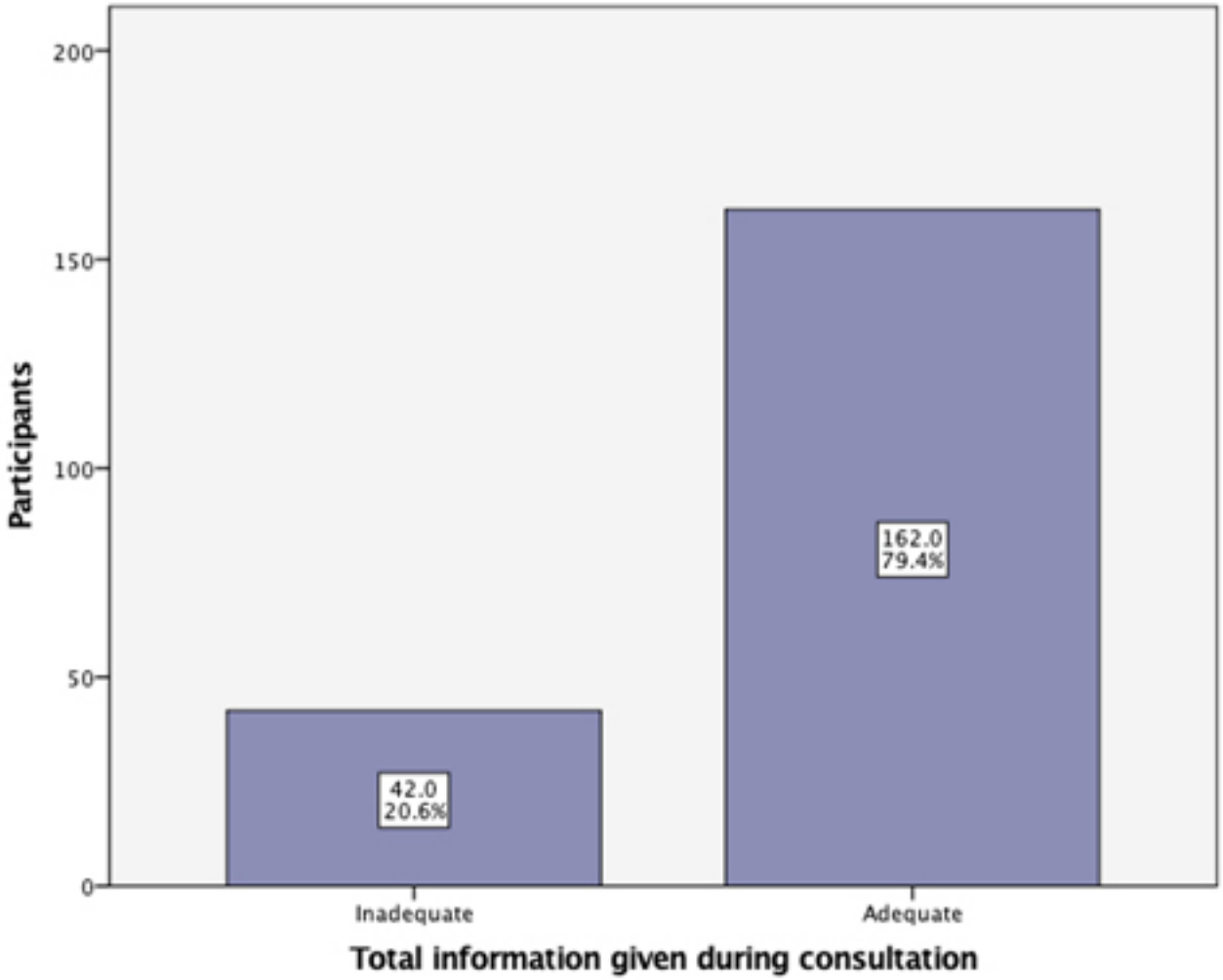
Socio-demographic characteristic	Number	Percentage
Age (Years)		
18-25	56	27.5
26-30	55	27
31-35	51	25
>35	42	20.5
Educational level		
Literate/read & write	6	2.9
Primary	12	5.9
Secondary	10	4.9
Tertiary	73	35.8
University and above	103	50.5
Occupation		
Housewife	163	79.9
Working	41	20.1
Family income		
<5000 Saudi Riyal	42	20.6
5000-10000 Saudi Riyal	114	55.9
11000-20000 Saudi Riyal	45	22
>20000 Saudi Riyal	3	1.5
Gestational period		
1st trimester (0-13weeks)	76	37.3
2nd trimester (14-26weeks)	69	33.8
3rd trimester (27-40weeks)	59	28.9
Number of pregnancies		
1	55	27
2-4	98	48
5-8	51	25
Number of children		
0	61	29.9
1-3	103	50.5
4-7	40	19.6
Number of Prenatal visits		
1	56	27.5
2-4	116	56.9
5-9	32	15.6

Table 2: Adequacy of information received during Antenatal visit (n=204)

Information	Not enough/ No information received n (%)	As much as wanted n (%)	Too much n (%)
Information about health care	14 (6.8)	161 (79)	29 (14.2)
Information about medicines	17 (8.3)	168 (82.4)	19 (9.3)
Information about delivery	40 (19.7)	145 (71)	19 (9.3)
Information about breast feeding	74 (36.3)	103 (50.5)	27 (13.2)
Information about family planning	86 (42.2)	100 (49)	18 (8.8)

Figure 1 illustrates the adequacy of overall information given to participants during consultation with their physicians. Among the total 204 participants, 42 (20.6%) received inadequate overall information.

Figure 1: Participants' responses regarding adequacy¶ of overall information provided during antenatal care visit (n=204)



¶Adequacy of information categories based on a total score of 15:
Inadequate: score 0-8 Adequate: score 9-15

The participants were also asked if they received any instructions about danger signs during pregnancy, and when to seek emergency care. Around one-third (32.3%) of the women either did not receive any instructions or thought that the instructions were insufficient for them.

4. Women's expectations about quality of Antenatal care available at PHCC

Most women (80.4%) considered consultation time the same as they expected. Around two thirds (64.7%) of women expected the same physician attending them in every visit. A total of 141 (69.1%) women expected management from their physician on facing minor health problems. Only 20 (9.8%) women expected an immediate referral on facing minor health issues (Table 3).

Table 3: Women's expectations about quality of Antenatal care available at PHCC

Expectations among women visiting ANC.	Number	Percentage
Visits number (n=203)		
more than expected	14	6.9
less than expected	39	19.1
same as expected	150	73.5
Waiting time (n=204)		
more than expected	45	22.1
less than expected	38	18.6
same as expected	121	59.3
Time spent with doctor: (n=204)		
more than expected	27	13.2
less than expected	13	6.4
same as expected	164	80.4
Same doctor every visit: (n=204)		
No	20	9.8
Yes	132	64.7
No preference	52	25.5
Health problem: (n=204)		
Management	141	69.1
Referral immediately	20	9.8
Referral when needed	43	21.1

5. Women's Satisfaction with antenatal care services

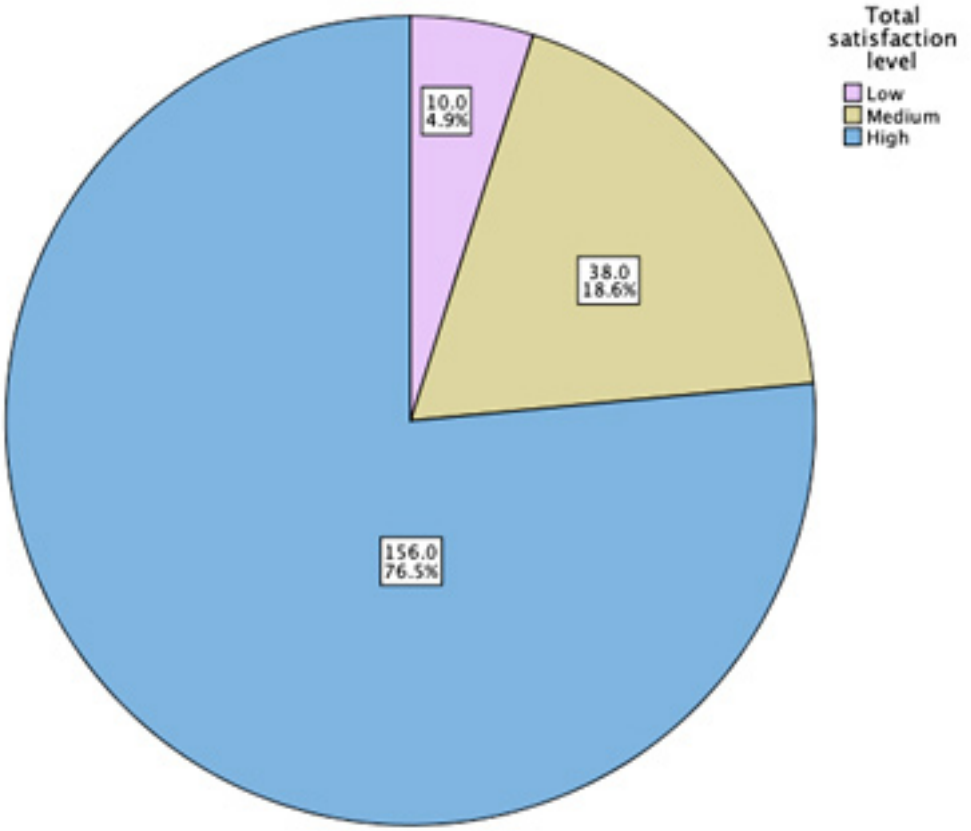
The majority of women were satisfied regarding overall information received (n=189, 92.7%), care received from physicians (n=201, 98.5%) and general quality of the health care provided (n=189, 92.7%). In contrast, around one quarter (22.5%) of the participants were neutral or dissatisfied about the waiting time at the clinic and about one-fifth were neutral or dissatisfied with the total time spent from entering the clinic to leaving it (Table 4).

Table 4: Women's Satisfaction with antenatal care services at Primary Health Care Centers (n=204)

Statement	Strongly Agree/Agree No. (%)	Neutral No. (%)	Strongly disagree/ disagree No. (%)
I am satisfied with overall information received during my visit	189 (92.7)	6 (2.9)	9 (4.4)
I am satisfied with the way physician treats the patient	201 (98.5)	2 (1)	1 (0.5)
I am satisfied with the quality of care received from physician	189 (92.6)	6 (2.9)	9 (4.4)
I am satisfied with the waiting time	158 (77.5)	28 (13.7)	18 (8.8)
I am satisfied with the total time spent in clinic	165 (80.9)	19 (9.3)	20 (9.8)
I am satisfied with the number of visits I made until now	177 (86.8)	19 (9.3)	8 (3.9)
In general I am satisfied with the quality of care I received so far.	186 (91.1)	13 (6.4)	5 (2.5)

The mean total satisfaction score was 29.6±4.5, with a minimum score of 12 and a maximum of 35. The mean scores were categorized into low (7-21), medium (22-27) and high (28-35) level of satisfaction. A total of 156 (76.5%) participants expressed a high level of satisfaction with the antenatal care services provided at the primary health care center (Figure 2).

Figure 2: Level of satisfaction among women visiting antenatal care clinic (n=204)



On stratifying level of satisfaction according to age groups, 82.8% of the women in 31-50 years age group were highly satisfied with the antenatal care services as compared to 71.2% of the women in 18-30 years age group.

On enquiring whether the participant would come back to the clinic for ANC follow up, 143 (70.1%) women responded in affirmation, however, 61 (29.9%) either refused to come back or were not sure about it. When asked regarding recommendation of the clinic to others, 77.8% of women stated that they would recommend the clinic to a friend or relative while 22.2% either refused to recommend or were not sure about it.

The association of sociodemographic factors with mean satisfaction scores was analyzed. None of the demographic factors had a statistically significant association with the satisfaction scores, however, various categories of demographic factors had differences in the mean scores. The mean scores for satisfaction with antenatal care progressively increased with decreasing household incomes with the highest mean score (30.36±5) for women with household income of 5,000 SR or less, and the lowest mean score (26.67±1.5) for those having household income of 20,000 SR or more. Women in third trimester had slightly higher mean satisfaction scores (30.41±0.45) as compared to the women in first (29.86±5.38) and second trimester (28.87±4.39).

The association of sociodemographic factors with total mean score of perceived adequacy of information was explored. Out of the total 15, the mean score for women of 31-50 years age group was 12.37±3.24 while the 18-30 years age group had a mean score of 10.63±4.02; this difference was statistically significant at p=0.001. The pregnancy number (p=0.015) and the number of children (p=0.001) were also statistically significantly associated with perceived adequacy of information received during antenatal care visit.

6. Suggestions by study participants

Twenty-five (12.3%) participants provided suggestions for improvement of antenatal care. The suggestions included availability of ultrasound, improvement in management of ANC clinics such as better organization to minimize waiting time, special clinic and doctor for ANC follow up and overall improved care and equipment. Moreover, provision of more health education about delivery and postpartum period and distribution of health education brochures, were also suggested by the study participants.

Discussion

The current study was conducted to assess pregnant women's expectations about antenatal care and to measure their overall level of satisfaction with the quality of care provided at PHCCs in Unaizah city. Furthermore, we investigated the association of demographic factors with the level of expectations and satisfaction. In our study, the response rate was 92.7% which is considered an excellent survey response [13].

Waiting time is reported to influence the level of satisfaction of clients, as it is imaged as an important predictor of satisfaction. Long waiting time is found to be associated with dissatisfaction with care in many studies [3, 14, 15, 17-20]; the more the time of waiting the less the level of satisfaction. There are no set standards for waiting time, however, studies have reported that the duration of waiting time before antenatal care for some of the women was perceived as long [18, 21]. In our study, approximately one quarter (22.5%) of the participants were dissatisfied about the waiting time at the clinic and about one-fifth were dissatisfied with the total time spent from entering the clinic to leaving it. The long waiting times might be explained by shortage of medical staff as compared to the number of clients attending the PHCCs. Moreover, lack of appointment system at PHCCs may also lead to long waiting times. A systematic review of maternal satisfaction studies done in developing countries, including Saudi Arabia, concluded that promptness of care is considered a major determinant of maternal satisfaction [22]. Another study conducted in Oman also had similar findings [23].
One of the main goals of ANC is the provision of adequate information that is essential for maintaining and improving pregnancy outcomes [15]. In our study, the majority of women responded that they received relevant information as much as they wanted. However, a substantial proportion of women did not receive information, or they believed it was not enough especially about breast feeding, family planning and contraception. Moreover, crucial instructions about signs of danger and when to seek emergency care in pregnancy, were also reported insufficient by a noticeable proportion of the study participants. The findings concur with another study in Saudi Arabia which found that 22% of pregnant women were unsatisfied with the antenatal care counseling [24]. A study conducted in Egypt also reported low satisfaction with health education components [9]. This finding underscores the importance of continuous training programs to health care providers to improve their knowledge and communication skills.

In our study, higher mean scores for adequacy of information were obtained by older and multiparous women. This may be explained by the fact that increasing age and multiparity may lead to better awareness regarding pregnancy issues because of previous experiences, resulting in being satisfied with the information received from the healthcare provider.

In the current study, more than two thirds of women expected to be seen by the same physician on every visit. This suggests that the patient felt more comfortable with the doctor they followed with, which is a good predictor for patient-doctor relationship. In another study [22], preference for female providers emerged as a significant determinant of satisfaction which can be attributed to the cultural values. In a study conducted in 4 countries: Saudi Arabia, Thailand, Cuba and Argentina; only Saudi women expressed a clear preference for being seen by female doctors in antenatal care [25]. This can be explained by the religious and cultural values of Saudi Arabia. In our study, we did not explore female preference as generally in most PHCCs in Saudi Arabia and specifically in our study setting Unaizah, female physicians are responsible for antenatal care follow up.

Few participants in our study expected an immediate referral on facing minor health issues. As per referral protocol, there are specific indications for referral to secondary care, and it is not advisable to refer the patient to a higher-level health facility for minor health issues. This finding in our study, underscores the importance of addressing the misconception among some women that PHCC is just a referral facility.

The overall level of satisfaction among women visiting antenatal care clinic was high. This finding is in accordance with other studies [3, 6, 23, 26] which also showed high satisfaction level with antenatal care services. In contrast, the overall maternal ANC service satisfaction was found to be sub-optimal in a study conducted in Ethiopia [17].

Returning to the same health care facility and recommending it to others are important indicators of satisfaction with the care provided at the facility. In our study, a substantial proportion of participants did not intend to come back or recommend the clinic to a friend or relative. Further research is recommended to explore the reasons of refusal to come back to the same clinic and for not recommending the clinic to others.

Various studies have found association of antenatal care satisfaction to demographic factors such as age, education, and occupation. In a study conducted in Saudi Arabia [3], it was found that older, less educated women, and housewives were more satisfied with client- provider interaction and with the quality of antenatal care. Other studies [14-16] also found that low educated women had high satisfaction level. This may be attributed to low education leading to lack of awareness about care they could expect at the antenatal clinic. In contrast to the studies mentioned above, our study did not find a statistically

significant association of any of the demographic factors with the antenatal care satisfaction; however, we noticed that various categories of demographic factors had differences in the mean scores. The mean scores for satisfaction with antenatal care progressively increased with decreasing household incomes. Furthermore, women in third trimester had slightly higher mean satisfaction scores as compared to women in first and second trimester. The reasons for these differences need to be explored in future research.

This study has certain limitations. As our study was conducted within the PHCCs, there might be overestimation of the level of satisfaction. However, efforts were made to minimize this bias by ensuring the participants that the questionnaires were processed anonymously. Furthermore, our study surveyed the patients attending selected PHCCs in only one city which may limit generalization to other cities. However, other cities of the country are expected to have a similar demographic profile of general population, and similar standard of health care services in PHCCs, making it possible to generalize our findings to other areas.

Conclusions

The present study found that the overall satisfaction with the quality of antenatal care was high. The majority of women were satisfied with the overall information received, care received from physicians and general quality of health care provided. However, some aspects of services showed dissatisfaction including waiting time and the total time spent in the clinic. Around one third of the participants either refused or were not sure whether they will visit the same PHCC again, and approximately one quarter responded that either they would not recommend the clinic to a friend or relative or were not sure about it. Improvement in the management of ANC clinics and provision of equipment such as ultrasound, and enhancement of health education were the suggestions by the participants. Based on the findings of our study, we recommend that administrative measures should be taken to improve the management of ANC clinics especially regarding waiting time. Improvement in health education regarding breast feeding and contraception is also required. The health care providers need to be trained to provide clear instructions regarding danger signs during pregnancy and when to seek emergency care. Moreover, regular patient satisfaction surveys should be carried out to identify problem areas and to improve the quality of services.

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