Global Health Journal 6 (2022) 192–197

Contents lists available at ScienceDirect

Global Health Journal

journal homepage: https://www.keaipublishing.com/en/journals/global-health-journal/

RESEARCH ARTICLE

How consultation-relational empathy and demographics influence satisfaction with primary antenatal health care: evidence from rural Nigeria

Ajibola A. Ishola [a,*], Kolawole Lateef Kazeem [b]

[a] Department of Psychology, University of Ibadan, Ibadan, Nigeria
[b] Department of Sociology, College of Management and Social Science, Fountain University, Osogbo, Nigeria

ARTICLE INFO

Article history:
Received 6 April 2022
Received in revised form 2 August 2022
Accepted 6 September 2022
Available online 20 September 2022

Keywords:
Consultation and relational empathy
Patients' satisfaction
Antenatal care (ANC)
Pregnant women

ABSTRACT

Objectives: This study aims to explore the role of consultation and relational empathy (CARE) and socio-demographic profile as predictors of patients' satisfaction among pregnant women attending antenatal care (ANC) in selected public primary health facilities in rural sub-districts of Saki, Oyo State, Nigeria.
Methods: This cross-sectional study recruited a total of 582 pregnant women in four primary health centers. Expectant mothers responded to a questionnaire covering demographic characteristics, clinic visitation, CARE, and patients' satisfaction. All data was analyzed using descriptive, univariate and multivariate statistical tools. $P < 0.05$ level was considered statistically significance.
Results: Findings revealed that the participants had a mean age of 23.15±5.23 years. The pattern of patients' satisfaction revealed that 13.40% (78/582) were highly satisfied with the health care received compared to 86.60% (504/582) with moderate to low satisfaction ratings with ANC. Highly satisfied patients placed higher value on technical quality, interpersonal relation, communication, financial aspects, time spent and accessibility convenience ($P = 0.001$). Multiple linear regression model indicated that relational empathy ($\beta = 0.28$, $P < 0.001$), 2nd trimester of pregnancy ($\beta = 0.13$, $P = 0.01$), age categories of 30–< 40 years ($\beta = -0.12$, $P = 0.02$), and 40–< 50 years ($\beta = -0.11$, $P = 0.04$), religious affiliation ($\beta = 0.10$, $P = 0.03$) predicted satisfaction with ANC.
Conclusion: Low patients' satisfaction with antenatal healthcare services resulting from hostile attitudes from health workers has implication for the delivery and acceptability of services offered to eradicate maternal mortality globally. Thus, regular training and re-training of health care personnel in frequent contact and interaction with patients will go a long way in reducing untoward work attitude and maternal mortality in rural ANC centers globally.

1. Introduction

Antenatal care (ANC) is indeed a major part of preventative healthcare, and by awareness, consultation and appropriate medical procedures decreases the likelihood of pregnancy complications.[1] Antenatal treatment has been described by Nuraini et al. as a crucial technique for minimizing maternal deaths and a significant determinant of safe childbirth.[2] In order to ensure healthy gestation, labor and puerperium, ANC relates to health education, monitoring and care. However, over 31% of expectant mothers in rural areas do not seek ANC because of poor satisfaction with ANC.[1,3–4] Satisfaction refers to a state of pleasure or contentment with an action, event or service, especially one that was previously desired. When applied to medical care, patient satisfaction can be considered in the context of patient's appraisal of their desires and expectations of health care.[1,5–6] Satisfaction with ANC is the women satisfaction with the location, quality of care services offered, amenities and behavior of the health personnel.[1,3]

World Health Organization have advised that expectant mothers must feel very welcome at ANC clinics in that they should be user-friendly.[7] Evaluations and tests to match the individual should be carried out at user convenient times. Teamwork among health practitioners and a pregnant woman is essential to health of both the pregnant woman and the fetus. Every woman is entitled to receive recommended ANC services from an experienced birth attendant. A skilled caregiver is trained not only to attend normal pregnancies, but also to identify and manage medical problems and make hospital referrals if more advanced care is required.[8] High standard practice of ANC, alongside healthy and safer child birth, routine obstetric treatment and family planning, has

* Corresponding author: ajibola_ishola@yahoo.co.uk.

https://doi.org/10.1016/j.glohj.2022.09.001

been described as one of the four foundations of Safe Motherhood and may lead to reducing maternal deaths.[9] Poor antenatal services, after unsatisfactory obstetric services, is deemed the second most significant causative factor in maternal mortality.[9] Consequently, satisfaction with the services rendered was generally accepted as a determinant of the quality of the antenatal treatment given both in the delivery phase and in the result of the delivery. In Nigeria, the prevalence of abusive practices is on the increase in recent times thus affecting the attitude women coming for natal care.[10] This, in turn, influences the degree of satisfaction with health care service received to a large extent. Women's view of ANC most often dictates their ability to adhere to care regimen and to uphold it. Several research have demonstrated women satisfaction with antenatal services,[8,10] in particular, the quality, interpersonal interaction and care, have promoted high degree of utilization and care regimen adherence. In comparison, however, reports have also found that clients are often disappointed with antenatal treatment.[4,10] The explanations for discontent were long queues, insufficient supply of medication and pessimistic perceptions of the health staff in the majority of these surveys. Sometimes, health professionals have been rudely handling people.[4,8,10]

Increasing attention is being paid to patients' views on care and the consultation. Some of the foundations of modern professional ethics and procedures are the partnership between health professionals and patient users. In other words, it is vital to the health care providers and consumers both to increase the diagnosis accuracy and to increase awareness of the patient about the disease.[11–12] The degree of connection and reciprocal reciprocity among the patient and caregivers is necessary. In Nigeria, however, the healthcare provider in the formal sector was defined as gross, carefree, unkind, and uncomfortable in providing services, not only for pregnant women.[13]

Empathy is known to be a central part of all interpersonal interactions and an integral element in care satisfaction concepts. Empathy has been found to strengthen the interaction between the health care professional and the hospital's patient and to increase patient and practitioner satisfaction. Moreover, because empathy is deemed necessary for therapeutic planning, growth and continuance, empathy in clinical sense was implied as being capable of knowing the circumstance, experience, and emotions of the individual, and their related meanings; of communicating and verifying the correct essence of that knowing; and of acting on the patient's state, world view and meanings. In other ways, the word "relational empathy" is used to characterize this method. The more cordial interaction between healthcare givers/doctors and patients is, it will be easier to agree on the medical interventions for the health problem of patients and more deeply to comprehend the illness and life outcomes.[12] This can affect the successful contact, which contributes to the appropriate usage of healthcare, contributing to a state of confusion and dependency by healthcare seekers.[11] In several trials, empathic consultations have been shown to increase decrease discomfort, distress and patient dissatisfaction.[14] In addition, empathic consultation was demonstrated to be beneficial to women attending ANC.[15] A meta-analysis of maternal healthcare providers' attitudes and behaviors demonstrated that low consultation-empathy, pessimistic approaches and behaviors could undermine pregnant women health care seeking behavior and subsequent poor well-being in low- and middle-income countries.[16]

Thus, this study examined the pattern of consultation and relational empathy (CARE), socio-demographic characteristics of women and their relationship with patients' satisfaction, as following: (1) to examine the current perception of health care providers' CARE in ANC among pregnant women attending healthcare facilities in Saki-west local government area (LGA); (2) to examine the current status of dimensions of patient satisfaction and its association with overall satisfaction among pregnant attending healthcare facilities in Saki-west LGA; and (3) to examine the psychological and socio-demographic factors predicting patients' satisfaction with antenatal healthcare facilities in Saki-west LGA.

2. Methods

2.1. Study design

From April to October 2018, this cross-sectional study was carried out in Saki-west LGA, Oyo State of Nigeria. The population drawn from the study population consisted of pregnant women and girls attending the ANC at the primary health centers (PHCs) offering antenatal, post natal care and other health services in Saki-west LGA. Purposive sampling was used to select four public health centers in Saki-west LGA. About 146 participants were randomly selected from each of the selected PHCs summing up to a total of 584; however, two persons were dropped because of incompleted questionnaire. Finally, 582 complete data was useable.

Ethical approval was obtained from the ethical review committee of Department of Psychology, University of Ibadan. The researcher briefly summarized the respondents on the purpose for the study under the permission from the medical directors of the selected PHCs. Informed consent for participation was obtained from each patient before administration of the questionnaire. Questionnaires that are well filled were used in the data analysis.

2.2. Instruments

This study utilized a self-report questionnaire. Demographic information covered age, gender, religion, parity, Gravidity, frequency of antenatal visits of the expectant mothers. The CARE measurement was developed by Mercer et al. with rigorous testing the patient-health care providers' interaction, which was adopted to assess the relationships between patients with healthcare professionals in this study.[17] Patients scored 10 questions on CARE measure with items such as 'how did medical workers help you feel safe and secure' with a ranking of one for 'very poor' and five for 'excellent'. Thus, the total CARE scores rate from 10 to 50. The higher scores, the more cordial/stronger empathic relationships between patients and the healthcare providers represent.

The Patient Satisfaction Questionnaire Short Form (PSQ-18) assessed to satisfaction the patient before conception.[18] The PSQ-18 contained 18 items evaluating general satisfaction (two items), technological efficiency (four items), behavioral approach (two items), communication (two items), financial factors (two items), time spent with practitioner (two items), usability and ease (four items). Such items were graded in the range of one for 'strongly agreed' to five for 'disagreed strongly' on a five-point scale. The scales consisted of nine positively and nine negatively phrased statements. The total satisfaction score is calculated by summing ratings across the 18 items with possible scores ranging from 18 to 90. Increasing high score is seen to be more pleased with medical treatment. Each aspect that seeks to address concrete healthcare quality goals and patient satisfaction is measured by means of multiple relevant questions that define a specific area. The items in the same subscale were summed together after the items were estimated to generate the seven subscale scores.[18]

2.3. Statistical analysis

The data from the questionnaire was analyzed using SPSS version 20. This research employs the descriptive as well as the inferential statistics for the analysis of data. We examine the current status of patients' perception of health care providers' CARE, overall and dimensions of patients' satisfaction using descriptive statistics frequency count, simple percentage, mean and standard deviation (mean ± *SD)*. To assess the strength of each dimension of patients' satisfaction, the Pearson Product-Moment Correlation coefficient (*r*) was adopted. The value of *r* ranges from +1 to −1 which show highest positive and negative relationships as well zero meaning no relationship.

For levels of patients' satisfaction based on psychological and social variables, (mean ± *SD)* scores were generated and tested using *t*-test for

independence or ANOVA to compare scores on patients' satisfaction by their levels or category. Multiple regression analysis was used to test the association between variables. $P < 0.05$ was considered statistically significant.

3. Results

3.1. Socio-demographic characteristics of pregnant women

Finally, 582 patients were sampled in this study. Participants had a mean age of 23.15 ± 5.23 years. A total of 35.74% (208/582) of respondents were aged between 18–< 30 years, 43.99% (256/582) were within the ages of 30–< 40 years, 14.09% (82/582) were within the ages of 40–< 50 years, and 6.19% (36/582) were above 50 years old. Fast 94.5%, (550/582) were married and majority Christians or Muslim. The results indicated that 12.71% of respondents had primary education, 37.46% (218/582) were secondary school graduates, and 49.83% (290/582) have attended tertiary institutions of learning. Occupational profile results indicated that 19.93% (116/582) of respondents were civil servants while 33.33% (194/582), 32.99% (192/582) and 13.75% (80/582) were Trader/Business woman, artisans and professionals, respectively. The larger percentage reported experiencing low relational empathy (56.36%). Women who had experienced 1–3 pregnancies constituted the larger percentage (63.06%, 367/582), while more than two-third (79.73%) had between 0–3 children and 20.27% (118/582) with 4–5 children. A greater percentage of respondents (43.64%, 254/582) had attended the antenatal once or twice, 14.43% (84/582) had visited occasionally, and 41.92% (244/582) twice a month. More than half of the women were in their second trimester 57.39% (334/582), 24.74% (144/582) in their first trimester and 17.87% (104/582) in the third trimester (Table 1).

3.2. Perception of health care providers' care

Overall, women attending ANC reported empathic experiences while receiving ANC. About 94.51% (550/582) of the women received friendly, warm and respectful treatment from healthcare; given time to fully describe the illness in own words uninterrupted 91.75% (334/582). All the respondents received rapt listening attention and were treated as a whole person 90.38% (526/582). Health workers were described to showed compassionate care 91.41% (532/582), positive attitude 91.41% (532/582) rendered empathic and clear information 88.66% (516/582). The health worker supported the women's personal initiatives 94.51% (550/582) and decisions 89% (518/582) about their health. The women average score on CARE was 38.53 ± 7.36. Women with high patients' satisfaction reported more empathic care from healthcare workers compared to women with low to moderate satisfaction. Also, women with one or two previous visits to antenatal clinic reported more scores on CARE in ANC.

3.3. Patients' satisfaction among pregnant mothers

The analysis of patients' satisfaction revealed that mean scores overall patients' satisfaction and its dimensions were above average mean value. The normed scores on overall patient's satisfaction ranged from 65 to 90 (74.77 ± 5.03). About 13.40% (78/582) of the participants with scores > 79.80 were classified as highly satisfied with the ANC, while 86.60% (504/582) with scores ≤ 79.80 had low- and moderate-satisfaction.

An independent *t*-test was used to compare patient low and high on patients' satisfaction. Results indicated that there were significant differences between high and low patients' satisfaction on all seven dimensions (general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent, and accessibility convenience).

Table 1
Pregnant women perception of health care providers' consultation and relational empathy in antenatal care (n = 582).

Item	Person (n)	Percentage (%)
Making client feel at ease		
Poor	32	5.50
Fair	0	0
Good	80	13.75
Very good	258	44.33
Excellent	212	36.43
Letting client tell client "story"		
Poor	32	5.50
Fair	16	2.75
Good	100	17.18
Very good	240	41.24
Excellent	194	33.33
Really listening		
Poor	0	0
Fair	0	0
Good	142	24.40
Very good	258	44.33
Excellent	182	31.27
Being interested in client as a whole person		
Poor	32	5.50
Fair	18	3.09
Good	142	24.40
Very good	190	32.65
Excellent	194	33.33
Fully understanding client concerns		
Poor	0	0
Fair	32	5.50
Good	174	29.90
Very good	256	43.99
Excellent	120	20.62
Showing care and compassion		
Poor	32	5.50
Fair	18	3.09
Good	168	28.87
Very good	172	29.55
Excellent	192	32.99
Being positive		
Poor	34	5.84
Fair	16	2.75
Good	204	35.05
Very good	236	40.55
Excellent	92	15.81
Explaining things clearly		
Poor	34	5.84
Fair	32	5.50
Good	152	26.12
Very good	304	52.23
Excellent	60	10.31
Helping client to take control		
Poor	0	0
Fair	32	5.50
Good	198	34.02
Very good	272	46.74
Excellent	80	13.75
Making a plan of action with client		
Poor	16	2.75
Fair	48	8.25
Good	144	24.74
Very good	236	40.55
Excellent	138	23.71

Pearson correlational analysis was used to determine the strength and direction of correlation between two variables. Almost all dimensions of overall patients' satisfaction (general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent) were positively correlated except for accessibility convenience, although there were negative correlations at some strength levels. The strength of these relations varied from dimensions to dimensions. Among all dimensions, technical quality, accessibility convenience, and time spent demonstrated the strongest associations with overall patients' satisfaction.

Table 2
Patients' satisfaction based on demographic characteristics (mean ± *SD*).

Variables	Score	*F*	*P*
Age			
18–< 30 years	75.31 ± 5.16		
30–< 40 years	74.20 ± 4.75	2.63	0.04
40–< 50 years	74.66 ± 4.99		
≥ 50 years	76.00 ± 5.87		
Marital status			
Married	74.63 ± 4.93	8.76	< 0.001
Single	77.31 ± 6.03		
Religion			
Christianity	74.75 ± 5.28		
Islam	74.65 ± 4.71	3.12	0.04
Traditional African religion	78.33 ± 5.52		
Educational status			
Primary school	75.38 ± 5.84		
Secondary school	74.39 ± 4.78	1.25	0.29
Tertiary education	74.90 ± 4.98		
Occupation			
Government official	75.10 ± 4.91		
Trader/Business woman	74.74 ± 5.04	0.25	0.86
Artisan (Tailor, goldsmith, bricklaying, hairdresser)	74.59 ± 5.31		
Professional (Nurse, accountant, secretary, teacher)	74.80 ± 4.51		
Type of family			
Nuclear family (Husband and children)	74.95 ± 5.18		
Polygamous family (Immediate and other wives)	74.51 ± 4.54	0.47	0.62
Extended family (Immediate and other relatives)	74.59 ± 5.44		
Consultation and relational empathy			
Low	73.57 ± 4.35	6.79	< 0.001
High	76.32 ± 5.41		
Gravidity			
No previous pregnancy	75.12 ± 4.93		
1–3 previous pregnancy	74.77 ± 4.93	1.06	0.95
4–5 previous pregnancy	74.79 ± 5.30		
Parity			
0–3 children	74.79 ± 5.95	0.19	0.85
4–5 children	74.69 ± 5.35		
Frequency of antenatal visit			
Twice a month	74.61 ± 5.12		
Occasionally	74.76 ± 4.98	0.24	0.78
First time	74.93 ± 4.97		
Stage of pregnancy			
1st trimester	74.01 ± 4.95		
2nd trimester	74.92 ± 4.95	2.51	0.08
3rd trimester	75.37 ± 5.31		

SD: standard deviation.

Table 2 revealed that mean differences based on educational status, occupational category, type of family, gravidity, parity, frequency of antenatal visits, and stages of pregnancy were not significant ($P > 0.05$). And age, marital status, religious affiliation, and CARE were significant impacting factors ($P < 0.05$).

The linear regression model was used to test the predictive influence used obstetric and demographic characteristics on patient satisfaction. Results shown in Table 3 indicated that CARE was a sufficiently important patient satisfaction determinant ($P < 0.05$). Furthermore, being single, age categories of 30–< 40 years and 40–< 50 years, belonging to the traditional African religion, and 2nd trimester of pregnancy were important antecedent of patient satisfaction with ANC ($P < 0.05$). As seen in the Table 3, the potency of predictor order of the aforesaid five patients' satisfaction impacting factors were relational empathy ($\beta = 0.28$, $P < 0.001$), 2nd trimester of pregnancy ($\beta = 0.13$, $P = 0.01$), age category of 30–< 40 years ($\beta = -0.12$, $P = 0.02$), and 40–< 50 years ($\beta = -0.11$, $P = 0.04$), belonging to the traditional African religion ($\beta = 0.10$, $P = 0.03$).

The R^2 value indicates how much of the total variation in the dependent variable, was explained by the independent variables and R^2 is presented as a percentage of variance explained. In this study, $R^2 = 0.13$, i.e. 13.0% was explained, which is very large. The *F*–value reports how well the regression equation fits the data (i.e., predicts the dependent variable) and the value of $F = 4.08$ showed a statistical significant good fit. Adjusted (adj.) R^2 is a modified version of R^2 that has been adjusted for the number of predictors in the model. The decreases in the adj. $R^2 = 0.10$ compared to $R^2 = 0.13$ showed that the predictors improve the model by less than expected. The root mean square error (*RMSE*) is the residuals' standard deviation (prediction errors). Residuals are a measure of how far data points are clustered around the line of best fit from the regression line. Decreasing *RMSE* indicates good regression fit. *RMSE* = 4.78 supports a good regression line model fit.

4. Discussion

The preponderance of satisfaction of the respondents with antenatal health care was lower, 13.40% (78/582) of the expectant mothers were highly satisfied with ANC compared to 86.60% (504/582) who were moderately or poorly pleased with service. In line with the present results, the finding is similar to that of studies in Egypt and Myanmar which recorded lower percentage of women extremely pleased with ANC.[19–20] At the other side, the new research finding is quite low compared to widely reported satisfaction ANC rendered in urban public health facilities in Nigeria.[21–23] The overall satisfaction with ANC of the respondents in the present study was associated with all the dimensions of satisfaction; however, technical quality, accessibility/convenience, and time spent demonstrated the strongest associations with overall sat-

Table 3
Multiple linear regression on relational empathy, socio-demographics characteristics and pregnancy related factors for patient satisfaction.

Predictors	Patients' satisfaction				
	b	*SE*	*β*	*t*	*P*
Age					
18–< 30 years	REF	REF	REF	REF	REF
30–< 40 years	−1.26	0.55	−0.12	−2.29	0.02
40–< 50 years	−1.60	0.76	−0.11	−2.10	0.04
≥ 50 years	−1.78	1.16	−0.09	−1.53	0.13
Marital status					
Married	REF	REF	REF	REF	REF
Single	2.37	1.17	0.11	2.03	0.04
Religion					
Christianity	REF	REF	REF	Ref.	REF
Islam	−0.18	0.51	−0.02	−0.34	0.73
Traditional African religion	3.68	1.65	0.10	2.23	0.03
Educational status					
Primary school	REF	REF	REF	REF	REF
Secondary school	−1.25	0.78	−0.12	−1.62	0.11
Tertiary education	−0.64	0.83	−0.06	−0.77	0.44
Occupation					
Civil servants	REF	REF	REF	REF	REF
Trader/Business woman	−0.01	0.72	0.00	−0.01	0.99
Artisan (Tailor, Goldsmith, bricklaying, hairdresser)	−0.24	0.77	−0.02	−0.31	0.76
Professional (Accountant, Secretary, Teacher)	0.58	0.94	0.04	0.62	0.54
Family type					
Nuclear (Husband and children)	REF	REF	REF	REF	REF
Polygamous (Immediate and other wives)	−0.09	0.55	−0.01	−0.16	0.87
Extended (Immediate and other relatives)	−0.95	0.80	−0.06	−1.18	0.24
Frequency of antenatal visit					
Twice a month	REF	REF	REF	REF	REF
Occasionally	0.77	0.71	0.05	1.09	0.28
First time	0.29	0.49	0.03	0.59	0.55
Gravidity					
No previous pregnancy	REF	REF	REF	REF	REF
1–3 previous pregnancy	1.23	1.10	0.09	1.11	0.29
4–5 previous pregnancy	1.13	1.00	0.10	1.13	0.26
Parity					
0–3 children	REF	REF	REF	REF	REF
4–5 children	−0.74	1.05	−0.06	−0.71	0.48
Stages of pregnancy					
1st trimester	REF	REF	REF	REF	REF
2nd trimester	1.35	0.54	0.13	2.48	0.01
3rd trimester	1.32	0.68	0.10	1.93	0.05
Consultation and relational empathy					
Low	REF	REF	REF	REF	REF
High	0.19	0.03	0.28	6.82	< 0.001

REF: reference; $R^2 = 0.13$, adjusted $R^2 = 0.10$, $F = 4.08$; the root mean square error (*RMSE*) = 4.78, $P < 0.001$.

isfaction. The present findings are in agreement with the antenatal studies with similar findings by Edie et al. and Soliman.[24–25]

The result showed that CARE predicted patient's satisfaction with antenatal healthcare services. This finding is similar to the study of Kempe et al. wherein women attributed lack of cordial relationship with healthcare provider, fear of bad experiences or prior bad experiences during deliveries negative as factors influencing poor attendance and preferences for delivery in non-hospitals settings.[26] As observed by Izugbara et al., who reported incidents of unfriendly attitudes by healthcare professionals that impaired antenatal practice and delivery among gestational women.[27–28]Just as communication low in empathy was found to increase poor health care utilization and desperation among patients.[11,29]

Variations in satisfaction were predicted by age, marital status, religious orientation and subjective empathy were identified. Women who were singles reported more satisfaction with ANC. This is in contrast with findings from earlier studies.[8,30] Singles were more satisfied in the present study preferably because in rural areas unwed mothers are highly stigmatized. Thus, with the health care workers showing more cordial support the unwed mothers were more likely to be satisfied than wedded mothers. Results also demonstrated that women less than 30 years of age and those over 50 years of age reported more satisfaction patients with antenatal care. These findings demonstrate a u- curve association between maternal age and satisfaction with ANC. This is in agreement with Al-Ahmar et al. and Tocchioni et al. who demonstrated that older gestational women were more satisfied with the childbirth experience than the younger women because older females have lower childbirth expectations and were more realistic than younger mothers.[30–32] Belonging to the traditional African faith was associated with higher satisfaction compared to Christianity and Islamic faiths. The current study is contrary to earlier findings because traditional worshippers are more likely to use non-health institutions such as traditional birth attendants and herbalists; adopt conservative practices and reject modern healthcare.[33] As such, pregnant traditional women tend to be more satisfied with ANC due to exposure to modern health care. Women in the second trimester demonstrated more satisfaction with ANC. It is in accordance with Galle et al., who found that early gestational women had less familiarity poor evaluation of prenatal care compared to those in later stages.[34] Thus, women at later stage gestational stage tend to be happier with ANC than those in the early stage.[34] In the current findings, education, occupational status, parity and gravidity did not influenced satisfaction with ANC. This is in disagreement with Oladapo et al., Al-Ahmar et al., Tocchioni et al., and Chemir et al.[10,30–31,35]

5. Limitation and suggestion for future studies

This study was limited to pregnant women attending ANC in Saki-west LGA, Oyo state, Southwest Nigeria. Also, the small sample size is a major limitation. Thus, the generalization of the findings to other zones or cultural context may be limited. The cross-sectional design provided an opportunity to examine the variables at only one point in time, which means different research design could be used in future research. A mixed method design can provide a more robust data. Also, moderating and mediating factors should also be explored considering cost, cultural considerations and emotional competencies of health care providers.

6. Conclusion

Findings of this study have several implications. This study has shown that there are more underlying factors related to patient's satisfaction with ANC services than simply service quality, for example, empathy and so on. In addition to helping to enhance mothers' health outcomes, healthy behaviors and actions by healthcare professionals can also help to minimize neonatal mortality and morbidity as a consequence of the growing demand for professional treatment for pregnant women and moms. It is important therefore to tackle provider attitudes and actions, to ensure that development towards the Millennium Development Goals (MDGs) continues and to save the lives of women and children in developing countries.

The appraisal results have important consequences for the MDGs and indicate that this situation requires considerable greater focus. Negative behavior and actions, essential as programs or social obstacles, are main deterrents when seeking for treatment. Disregardful and violent abuse of women threatens the growing existence of prenatal care. The abuses of human rights that result from such practices, i.e. the right to treatment, to health services and protection from violence and negligence, are often a question of policy.

CRediT author statement

Ajibola A. Ishola: Conceptualization, Methodology, Formal analysis, Data curation, Supervision, Writing – original draft, Writing – review & editing. **Kolawole Lateef Kazeem:** Conceptualization, Methodology, Writing – original draft, Writing – review & editing.

Ethical approval and consent to participate

Prior the questionnaire was administered; each patient signed their informed agreement to participate. The ethical review committee of department of psychology, University of Ibadan gave its clearance [PSY-E024047]. Throughout the study, information was kept private and confidential. The instrument and procedure contain no identifiers.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

1. Akowuah JA, Danquah BA. Determinants of women's perceived satisfaction on antenatal care in urban Ghana: a cross-sectional study. *Clin J Obstet Gyncol.* 2019;2:38-53.
2. Nuraini E, Parker E. Improving knowledge of antenatal care (ANC) among pregnant women: a field trial in Central Java, Indonesia. *Asia Pac J Public Health.* 2005;17(1):3-8.
3. Hijazi HH, Alyahya MS, Sindiani AM, Saqan RS, Okour AM. Determinants of antenatal care attendance among women residing in highly disadvantaged communities in northern Jordan: a cross-sectional study. *Reprod Health.* 2018;15(1):106.
4. Onyeajam DJ, Xirasagar S, Khan MM, Hardin JW, Odutolu O. Antenatal care satisfaction in a developing country: a cross-sectional study from Nigeria. *BMC Public Health.* 2018;18(1):368.
5. Selgado MB, Dukele YC, Damene DA. Determinants of focused antenatal care service satisfaction in public health facilities in Ethiopia 2018: a mixed study design. *J Public Health Epidemiol.* 2019;11(8):158-169.
6. Shagaya YJ. Assessment of student's satisfaction and quality of patient care under the Nigerian tertiary institutions social health insurance programme (TISHIP). *Eur J Busin Manag.* 2015;7(6):20-30.
7. AbouZahr C. Safe motherhood: a brief history of the global movement 1947–2002. *Brit Med Bull.* 2003;67(1):13-15.
8. Lakew S, Ankala A, Jemal F. Determinants of client satisfaction to skilled antenatal care services at Southwest of Ethiopia: a cross-sectional facility based survey. *BMC Pregnancy Childbirth.* 2018;18(1):479.
9. Eittah HFA. Pregnant woman's knowledge, reaction to danger signs of pregnancy and utilization of antenatal services. *Am J Res Commun.* 2017;5(6):14-35.
10. Oladapo OT, Osiberu MO. Do socio-demographic characteristics of pregnant women determine their perception of antenatal care quality? *Matern Child Health J.* 2009;13(4):505-511.
11. Maguire K, Britten N. You're there because you are unprofessional': patient and public involvement as liminal knowledge spaces. *Sociolog Health Illn.* 2018;40(3):463-477.
12. Germov J. *Second Opinion: An Introduction to Health Sociology*. 6th ed. Melbourne: Oxford University Press; 2018.
13. John ME, Duke EU, Esienumoh EE. Respectful maternity care and midwives' caring behaviours during childbirth in two hospitals in Calabar, Nigeria. *Afr J Biomed Res.* 2020;23:165-169.
14. Howick J, Moscrop A, Mebius A, et al. Effects of empathic and positive communication in healthcare consultations: a systematic review and meta-analysis. *J R Soc Med.* 2018;111(7):240-252.
15. Jinga N, Mongwenyana C, Moolla A, Malete G, Onoya D. Reasons for late presentation for antenatal care, healthcare providers' perspective. *BMC Health Serv Res.* 2019;19(1):1016.
16. Mannava P, Durrant K, Fisher J, Chersich M, Luchters S. Attitudes and behaviours of maternal health care providers in interactions with clients: a systematic review. *Glob Health.* 2015;11:36.
17. Mercer SW, Maxwell M, Heaney D, Watt GC. The consultation and relational empathy (CARE) measure: development and preliminary validation and reliability of an empathy-based consultation process measure. *Fam Pract.* 2004;21(6):699-705.
18. Marshall GN, Hays RD. *The Patient Satisfaction Questionnaire Short Form (PSQ-18).* Santa Monica, CA: RAND Corporation; 1994.
19. Ismail NIAA, Essa RA. Pregnant women's satisfaction with the quality of antenatal care at maternal and child health centers in El-Beheira Governorate. *IOSR J Nurs Health Sci.* 2017;6(2):36-46.
20. Hsai NM, Matsui M, Ng CFS, et al. Satisfaction of pregnant women with antenatal care services at women and children hospital in South Okkalapa, Myanmar: a facility-based cross-sectional study triangulated with qualitative study. *Patient Prefer Adherence.* 2020;14:2489-2499.
21. Fawole AO, Okunlola MA. Adekunle AO. Clients' perceptions of the quality of antenatal care. *J Natl Med Assoc.* 2008;100(9):1052-1058.
22. Nwaeze IL, Enabor OO, Oluwasola TA, Aimakhu CO. Perception and satisfaction with quality of antenatal care services among pregnant women at the university college hospital, ibadan, Nigeria. *Ann Ib Postgrad Med.* 2013;11(1):22-28.
23. Emelumadu OF, Onyeonoro UU, Ukegbu AU, Ezeama NN, Ifeadike CO, Okezie OK. Perception of quality of maternal healthcare services among women utilising antenatal services in selected primary health facilities in Anambra State, Southeast Nigeria. *Niger Med J.* 2014;55(2):148-155.
24. Edie GE, Obinchemti TE, Tamufor EN, Njie MM, Njamen TN, Achidi EA. Perceptions of antenatal care services by pregnant women attending government health centres in the Buea Health District, Cameroon: a cross sectional study. *Pan Afr Med J.* 2015;21:45.
25. Soliman FE. Satisfaction of rural pregnant women as quality indicator of provided antenatal care at Tanta City in Egypt. *Int J Sci Res Publ.* 2015;5(3):1-9.
26. Kempe A, Alwazer FAN, Theorell T. Women's authority during childbirth and safe motherhood in Yemen. *Sex Reprod Healthc.* 2010;1(4):129-134.
27. Izugbara CO, Wekesah F. What does quality maternity care mean in a context of medical pluralism? Perspectives of women in Nigeria. *Health Policy Plan.* 2018;33(1):1-8.
28. Aluko-Arowolo SO, Ogundimu AO, Solarin TM. Patient-physician relationship and ante-natal seeking behaviour in public hospitals. *J Med Med Sci.* 2015;6(5):95-103.
29. Murphy DJ, Mercer SW, Bruce D, Eva KW. Patients' role in workplace-based assessment of healthcare. *BMJ.* 2006;333:1.
30. Al-Ahmar E, Tarraf S. Assessment of the socio-demographic factors associated with the satisfaction related to the childbirth experience. *Open J Obst Gyn.* 2014;4(10):585-611.
31. Tocchioni V, Seghieri C, DeSantis G, Nuti S. Socio-demographic determinants of women's satisfaction with prenatal and delivery care services in Italy. *Int J Qual Health Care.* 2018;30(8):594-601.
32. van Eijk AM, Bles HM, Odhiambo F, et al. Use of antenatal services and delivery care among women in rural western Kenya: a community-based survey. *Reprod Health.* 2006;3:2.
33. Doegah PT. Investigating male presence at antenatal and choice of place for child delivery in Ghana. *Front Public Health.* 2019;7:300.
34. Galle A, Van Parys AS, Roelens K, Keygnaert I. Expectations and satisfaction with antenatal care among pregnant women with a focus on vulnerable groups: a descriptive study in Ghent. *BMC womens Health.* 2015;15:112.
35. Chemir F, Alemseged F, Workneh D. Satisfaction with focused antenatal care service and associated factors among pregnant women attending focused antenatal care at health centers in Jimma town, Jimma zone, South West Ethiopia; a facility based cross-sectional study triangulated with qualitative study. *BMC Res Notes.* 2014;7(1):164.