Middle East Journal of Applied Science & Technology
Vol.5, Iss.1, Pages 07-26, January-March 2022

Factors Influencing the Satisfaction with the Family Planning Services among Women of Reproductive Age Seeking Services at Health Facilities in Siaya County, Kenya

Dennis Kimanzi Kinyoki[1*], Dr. Daniel Onguru, PhD[2] & Dr. George Ayodo, PhD[3]

[1-3]*Department of Public Health, School of Health Sciences, Jaramogi Oginga Odinga University of Science and Technology, P.O. Box 210-40601, Bondo, Kenya.*

DOI: http://doi.org/10.46431/MEJAST.2022.5102

Copyright: © 2022 Dennis Kimanzi Kinyoki et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Article Received: 20 December 2021 *Article Accepted: 02 March 2022* *Article Published: 23 March 2022*

ABSTRACT

Client satisfaction is considered as one of the desired outcomes of health care and it is directly related to the utilization of health services. It reflects the gap between the expected and the experience of the service from the client's point of view. Currently, one of the most significant challenges in healthcare institutions is client retention as this problem has been largely attributed to the inherent lack of enough and satisfactory service to clients. It is against this background that the purpose of this facility-based, cross-sectional study was to investigate the factors influencing the satisfaction with the family planning services among women of reproductive age seeking services at health facilities in Siaya County, Kenya. The study was conducted among women of reproductive age seeking FP services in 4 sub-county public hospitals: Bondo, Ukwala, Madiany, and Yala, in Siaya County, as well as healthcare providers serving the women during the period of study. A simple random sampling technique was used to select the participants in quantitative findings while the purposive sampling technique was used for qualitative data. Data was collected using semi-structured questionnaires for women receiving service and a key informant interview guide for healthcare workers. Quantitative data were analyzed using descriptive statistics and inferential statistics using STATA (v 15) while qualitative data was analyzed using content analysis. Most (60.06%) of the clients served were aged between 20-24 years and 194 (56.56%) were married. The majority (92.71%) of the clients had high satisfaction with the services they received at the health facilities, and women with high levels of interaction with the providers were about 68% more likely to be satisfied with the FP services as compared to females with low provider-client interactions (OR= 0.68, p=.021<0.05). There was no statistically significant association between satisfaction and facility level, age category, marital status, who referred the females for FP services, the source of FP information, waiting time, cost of service, and level of education ($\alpha = 0.05$). The Ministry of Health, through the individual health facilities and relevant stakeholders, should identify mechanisms of maintaining the satisfaction of women using family planning methods, while ensuring more information is provided by the mainstream healthcare workers.

Keywords: *FP services, Client satisfaction, Client retention, Utilization of health services.*

1. Introduction

Total quality management (TQM) in healthcare provision is imperative in fostering client satisfaction (Jackson, 2000). Total quality management (TQM) is a methodology that dates back to the 1950s and has progressively grown in popularity since the early 1980s. Farzianpour *et al.* (2010) on the other hand, reckoned that healthcare institutions need to improve healthcare services by having experienced and competent staff. These statements ring true and draw parallels when it comes to quality of healthcare and client outcomes in addition to ensuing feedback. Other studies have also been undertaken over time on the relationship between quality of healthcare and client behavior both in the short and the long term (Cleary & McNeil, 1988). The significance of this precedence to healthcare organizations and especially those taking part in private practice is absolute since clients naturally gravitate towards the institutions that prove they can deliver high-quality healthcare services. There is, however, a wide range of aspects that have been identified as contributing to the quality of healthcare services. This is because outcomes are simply a sum of the various aspects compounding the operations within the healthcare organization. Studies have also covered these aspects with great depth.

Teamwork is one of the qualities perceived as being vital in fostering quality across all the departments in a healthcare facility. What this means is that various practitioners working together will advertently produce very desirable results in terms of client care. The traditional healthcare organization is characterized by facilities, human resources, and medical resources including appropriate medication for different conditions (Bukenya *et al.*, 2017;

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Mutemwa *et al.*, 2017; Obwoya *et al.*, 2018). Of paramount importance to the client, however, is the close personalized care afforded by both doctors and nurses. Clients are more likely to get better when they feel that they are under great care (Cleary & McNeil, 1988).

Clients are now aware of their requirements and rights, and they are aware that healthcare facilities exist to offer them adequately and high-quality health services (Farzianpour et al., 2015). As a result, the best way to analyze the effectiveness of a health care facility is to measure client happiness, and a completely satisfied customer feels that the organization can grasp client demands linked to health care (Bintabara et al., 2018; Memon et al., 2017; Nasr & Hassan, 2016). Client, provider, and facility perspectives can all be used to assess the quality of care.

Clients are now aware of their requirements and rights, and they are aware that healthcare facilities exist to offer them adequately and high-quality health services (Farzianpour et al., 2015). As a result, the best way to analyze the effectiveness of a health care facility is to measure client happiness, and a completely satisfied customer feels that the organization can grasp client demands linked to health care (Bintabara et al., 2018; Memon et al., 2017; Nasr & Hassan, 2016). Client, provider, and facility perspectives can all be used to assess the quality of care.

Farzianpour *et al.* (2010) assert that evidence-based practice is vital in the promotion of quality health. This follows the shifting trends in the healthcare landscape and the advancement of more effective methods. In the past decades, there has been a paradigm shift from the traditional way of operations to knowledge-based actions within most healthcare organizations.

The medical industry is experiencing an overhaul of outdated modes of practice into novel ways meant to be more effective in advancing medical services. This informs the current need among nurses and other healthcare providers to access the most recent, updated information that would be useful in their tackling of the emerging challenges in healthcare. There are many parallels to be drawn within this shifting landscape of healthcare provision. The new age has come with new challenges in terms of the medical conditions of clients and a corresponding proliferation of solutions to the problems that arise as a result.

In summary, total quality management could be regarded as a necessary ingredient in the fostering of client satisfaction and retention. There is, however, a wide range of qualities that surround total quality management and it is these qualities that determine its effectiveness. The first is the nature of the management of the organization, and the second is the training and teamwork developed within the practitioners in the organization. In the long run, the important strategies for the promotion of client satisfaction include effective communication, teamwork, enhanced efficiency in service delivery, and excellent relationships between providers and clients during and after treatment. Following total quality management, existing clients are retained while at the same time; new ones are attracted thus growing the number of clients visiting the institution.

When this happens, the healthcare organization will be able to tap into the advantages that come with the economies of scale. The other advantage will be in the full utilization of resources following the presence of clients around the clock hence minimizing wastage of resources. When such benefits are being accrued by the organization, their operations will be seamless with time. Furthermore, improved quality will help the organization gain a competitive edge over similar institutions and facilitate the generation of more revenue.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

It is apparent from the discussion above those profit-making hospitals depend on the revenue they get from clients. This means that they must attract as many clients as possible while at the same time maintaining the ones they already have. When clients become many in the name of clients, then the hospital through the administration must plan for better ways of providing quality care. The use of Electronic medical records is also one way of ensuring that many clients can be served within the shortest time possible and this enhances client satisfaction as well. The report by Leapfrog group which showed how the performance of US hospitals is below the attainable safety levels of clients and general client value is an indication that hospital administrators have to take appropriate action to gain client satisfaction. On the other hand, the satisfaction level of 88% and 96% in terms of a management plan and clinical picture respectively as reported by CHAPS need to be retained as further improvements are made.

1.1. Problem Statement

Client satisfaction is one of the anticipated outcomes of health care and is linked to the use of health services. It indicates the difference between what the client expects and what they get (Memon et al., 2017; Nasr & Hassan, 2016). Currently, one the most significant challenges in healthcare institutions is client retention as this problem has been largely attributed to the inherent lack of sufficient and satisfactory service to clients. The traditional client, in visiting an organization expects to get value for their money, which value can only be achieved through the provision of unique, fulfilling, and quality services (Asaolu *et al.*, 2019; Bintabara *et al.*, 2018). The achievement of this requires the co-ordination of roles between the care givers in an organization. In addition, within healthcare facilities, the relationship between the healthcare worker and clients is essential to fostering client satisfaction and subsequent retention (Nantsupawat *et al.*, 2017).

With increased competition among different institutions for clients, total quality management has been identified as a much-needed boost to an organization's competitive edge over the organizations it is in direct competition with (Tumlinson, 2016). There is however inadequate assessment of the satisfaction of clients, especially in the public health sector (Balasubramanian, 2016; Porney, 2015; Tumlinson, 2016). This is in line with the observation by Porney (2015) that failure to enhance quality services through improvement in efficiency, effective communication and teamwork would come with unprecedented reduction in the number of clients and subsequent decrease in revenues earned within the healthcare organizations. Today, there is not much area or region-specific information that describe the level of satisfaction of clients with the family planning services they receive in Siaya, making this study necessary, especially in order to unveil the unmet need in satisfaction, as well as describe the role of both the client and the health system, thereby improving the uptake of family planning methods.

1.2. Objectives

1.2.1. Broad objective

To investigate the factors influencing the satisfaction with the family planning services among women in Siaya County, Western Kenya.

1.3. Specific objectives of the Study

(1) To unveil clients' satisfaction level with the FP services in Siaya County, Western Kenya.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

(2) To identify the factors associated with the uptake of the family planning services among Women in Siaya County, Western Kenya.

(3) To establish the relationship between quality healthcare provision and family planning service users in Siaya County, Western Kenya.

1.4. Research Questions

(1) What is the level of clients' satisfaction level with the FP services in Siaya County, Western Kenya?

(2) What are the factors with the uptake of the family planning services among Women in Siaya County, Western Kenya?

(3) What is the relationship between quality healthcare provision and FP users in Siaya County, Western Kenya?

1.5. Justification of the study

With high standards of healthcare being upheld around the world, there has grown a need for improved services to clients. This has been undertaken around the world in form of measures geared towards enhanced quality of healthcare. The primary methods of improvement of quality of service delivered would be in the employment of a competent staff and the overarching ability of the healthcare management to embrace recommendations that are evidence based. It has also been determined that client satisfaction increases client attraction and retention.

The purpose of this paper was to unveil client satisfaction with the FP service and determining factors that are considered key client satisfaction.

1.6. Significance of the study

Promoting client satisfaction in healthcare has significant advantages for an organization. This study aims to add to the literature around client attraction and retention while utilizing family planning services. It can also be used by the industry policy makers to implement strategies geared towards attraction to services and quality management to foster client satisfaction and retention.

1.7. Scope of the study

The study was conducted in Siaya County in Western Kenya. Women who sought for FP services at public health facilities were requested to join the study and participate in an interview. Health workers who offered FP services were also interviewed. The study was looking at the interactions between providers and FP users, female's satisfaction while utilizing FP services and the associated factors among female using family planning services in Siaya County, Western Kenya. Data for this study was collected from women of reproductive age utilizing FP services between January 2019 and March 2019.

2. Methodology

2.1. Research design

The study used a facility-based survey to investigate the determinants impacting satisfaction among women using family planning methods in Siaya County, Western Kenya, using both quantitative and qualitative research

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

methodologies. This was a one-time point study that provided a "snapshot" of the situation, and the findings can be used to improve service delivery.

2.2. Study Area

This research was carried out in Siaya County, one of the counties in Kenya's old Nyanza Province. It is bordered on the north by Busia County, on the northeast by Kakamega County, on the east by Vihiga County, and on the southeast by Kisumu County. Homa Bay County, which is located south of Siaya County, shares a water border with it. The county's total size is roughly 2,496.1 km2. According to the 2009 Population and Housing Census, the county's population was predicted to be 842,304 people, with 398,650 men and 443,654 women. Gem, Ugunja, Ugenya, Alego-Usonga, Bondo, and Rarieda are the six administrative sub-counties that make up the county. The sub-counties are further divided into wards, with a total of 30 wards throughout the county. Siaya has a high poverty rate, with subsistence farming, livestock husbandry, fishing, rice farming, and small-scale trading being the main sources of income. This leaves the inhabitants to be less informed on health issues that are of public concern. This study will focus to draw its sample of women receiving family planning services from four of its five sub-county hospitals namely, Bondo Sub County Hospital, Ukwala Sub County Hospital, Madiany Sub County Hospital, and Yala Sub-County Hospital. Siaya county referral doubles up as the county referral and the facility serving Alego-Usonga Sub County. It was not included in the study as its status as a county referral hospital is higher than the other four Sub-County hospitals.

2.3. Study Population

All women seeking FP treatments in four public health institutions in Siaya County, Western Kenya, were included in the study. To aid triangulation of data, healthcare providers who provided direct assistance to the women during the study period were also questioned.

2.4. Inclusion criteria

The following criteria were used for the inclusion of participants into the study:

Willing to sign an informed consent for the study.

A resident of Siaya County for more than a year.

Previously or currently using FP.

2.5. Exclusion criteria

This study was excluded.

Unwillingness to sign an informed consent for the study.

Women who have lived in Siaya County for less than one year.

Women who have never used FP.

2.6. Sample Size Determination

To get the sample size, the Cochran formula was used for the sample size determination.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

$n = (Z^2pq)/d^2$

Where,

n=the desired sample size if the population is more than 10,000.

Z = standard normal deviate at required confidence level usually set at 95% (1.96).

p = proportion of the study population estimated to be have used or currently using FP is 50%

q = 1-p

d = level of statistical significance set, usually set as 0.05

$n=(1.96^2 X\ 0.5\ X\ 0.5)/0.05^2$

n = 384

Normally, when the study population is less than 10,000, the final sample is estimated (nf) using the formula:

$Nf=n/(1-(n/N))$

Where, Nf = final sample size of the population less than 10,000

n = the desired sample size when the population is more than 10,000

N is the estimated study population

The women catchment population using FP services for Siaya County, Western Kenya is 22,641, (KNBS, 2009). However, since the study takes 3 months, 2992,(KHIS) which is the number of females who attended the public facility for FP services between Jan and March 2018 was used as estimated study population (Health Facility Monthly Reports)

Therefore, **N** is less than 10,000

$Nf= 384/(1-(384/2992))$

$\boldsymbol{Nf}$ = 340

The study collected data from 343 respondents who are FP users.

Based on the distribution of the number of women of reproductive age the study respondents were distributed as below.

Table 1. Distribution of respondents by site

Site	n	%
Bondo District Hospital	135	39.36
Madiany Sub County Hospital	45	13.12
Ukwala Sub County Hospital	107	31.20
Yala Sub County Hospital	56	16.33
Total	**343**	**100.00**

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

2.7. Sampling

The purposive sampling method was used to recruit health care providers who in one way or the other provide FP services to the females at the public facilities. A simple random selection procedure was utilized to pick the participants after deciding the number of ladies to participate in the study. In basic random sampling, the researcher chooses each person at random, and all members of the population have an equal chance of being included. This is the most straightforward method of probability sampling and is easily applicable as not all members of the population can be available at a one-time point. The results are representative of the population unless the characteristics of interest in the population are uncommon. This is taken care of by having all sampled populations be women receiving services at the health facilities.

2.8. Data Collection Instruments

The study collected data using semi-structured questionnaires and key informant interviews. The tools were administered by the trained research assistants in a language best understood by the respondents and interviewees i.e. English or Kiswahili or local language to collect data.

3. Validity and Reliability of the research instruments

3.1. Validity

The validity of the instruments was defined in this study as the extent to which they covered the goals. Expert opinion was sought from other professors in the Department of Public Health to establish the validity of the instruments. These lecturers critically examined the items of the instruments and provided professional advice that was useful in the modification and enhancement of the questionnaires. Furthermore, the questionnaire items were simplified. Finally, the things were sorted into categories based on how simple or difficult they were.

3.2. Reliability

The instruments were pre-tested at Emuhaya Sub County Hospital in adjacent County, which has similar features to those found in the study area. Cronbach's reliability coefficient was used to measure the instruments' dependability after the pretest research. The reliability of the observation checklists was determined using the test-re-test procedure. According to George and Mallery (2003), a Cronbach's Alpha (0.89471) greater than 0.6 is regarded appropriate in the STATA output presented in Table 2. As a result, the measure had a high level of dependability, indicating that the measuring devices employed were quite consistent.

Table 2. Table Showing Reliability tests

Test scale = mean (unstandardized items)	Average inter-item covariance: 1.15672
Number of items on the scale: 57	Scale reliability coefficient: **0.89471**

3.3. Data Collection Procedures

The methodical procedures that the researcher takes to get data from the field are referred to as data collection procedures (Moser & Kalton, 2017). Quantitative data was collected using CSpro which is a mobile app. After

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

which, data was entered in the CSpro which was also a data collection mobile app. The CSpro was preferred because it eases data analysis since the data was just downloaded as a CSV.xl for analysis. Finally, CSpro reduces the risk of losing hard copies of observation checklists since there will be no observation checklists forms to be written except keying into the mobile App of the CSpro system. Data collection was done from November 1st, 2019 to January 31st, 2020 giving a total of 3 months.

3.4. Data Analysis

Quantitative and qualitative methodologies were used to analyze the data. The quantitative data was first edited and double-checked for accuracy before being coded and entered into the computer for analysis. For data analysis, STATA version 15 was employed. The data was analyzed using both descriptive and inferential methods. Thematic content analysis was used to analyze the qualitative data in order to ensure a deeper degree of knowledge.

3.5. Ethical Approval

The Board of Postgraduate Studies at JOOUST was approached for ethical clearance and permission to undertake this research. The Jaramogi Oginga Odinga Teaching and Referral Hospital Ethics Review Committee (JOOTRH-ERC) provided ethical approval for the study, and the Bondo Sub County Health Management Team provided additional authorization.

4. Results

4.1. Participant characteristics

The data used in this research was drawn from 343 women clients seeking FP services in Siaya County, derived from the sub-county hospitals: Bondo Sub County Hospital, Ukwala Sub County Hospital, Madiany Sub County Hospital, and Yala Sub-County Hospital. The distribution of the participants by the site is as shown below.

Table 3. Distribution of Respondents by Site

Site	**n**	**%**
Bondo District Hospital	135	39.36
Madiany Sub County Hospital	45	13.12
Ukwala Sub County Hospital	107	31.20
Yala Sub County Hospital	56	16.33
Total	**343**	**100.00**

Table 4. Respondent Characteristics

Characteristics	**n**	**(%)**
Age in years		
≤24	305	88.92
≥ 25	38	11.08

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Marital status		
Single	123	35.86
Married	194	56.56
Divorced, Separated, or Widowed	26	7.58
Level of education completed		
No education	8	2.33
Primary	168	48.98
Secondary	148	43.15
University/College	19	5.54
Person making referral		
Not referred	36	10.5
Provider	53	15.45
Community Health Volunteer	140	40.82
Family member	104	30.32
Others (including youth group/CBO member/peer educator)	10	2.92
Sources of FP information		
Provider	55	16.03
CHV	163	47.52
Friend/Family member	86	25.07
Media (radio, TV, newspaper)	34	9.91
Others	5	1.46
Waiting time		
< 1 hour	255	74.34
1-2 hours	72	20.99
> 2 hours	4	1.17
Others	12	3.50
Cost of service		
No Pay	296	86.30
Kes 10-80	6	1.75
Kes 100-1000	41	11.95
Provider client interaction		
Low	3	0.87
Medium	38	11.08
High	252	73.47
Others	50	14.58
Satisfaction		
Low	25	7.29
High	318	92.71

Preprint not peer reviewed

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

4.2. Women's satisfaction while utilizing FP services

On client satisfaction, only 109 (31.78%) believed that the health facility was far from home, while only 67 (19.54%) held the opinion that the waiting time was too long. Facility hours seemed convenient since it was supported by 326 (95.04%) of the respondents. Furthermore, the information given about the contraceptive method was sufficient, as stated by 329 (95.92%) of the respondents. The majority (336; 97.96%) of the respondents also confirmed that the privacy of the clients was maintained.

Nearly all (328; 95.62%) had had sufficient consultation time to discuss their needs. Furthermore, 336 (97.96%) respondents were able to easily understand the information given during the counseling by the provider. Again, nearly all the staff within the facilities were friendly and respectful as was supported by 337 (98.25%). In addition, 337 (98.25%) felt confident that the information they shared with the provider during the interview would be kept confidential. Nearly, all the participants (337; 98.25%) confirmed that they would go back to the same facility if they needed a contraceptive service again. Finally, 341 (99.42%) of the respondents would recommend contraceptive services to friends. The findings are summarized in the Table 5 below.

Table 5. Women's Satisfaction While Utilizing FP Services

Variables	**SA, n (%)**	**A, n (%)**	**D, n (%)**	**SD, n (%)**
Health facility far from home	32 (9.33)	77 (22.45)	201 (58.60)	33 (9.62)
Too long waiting time	18 (5.25)	49 (14.29)	239 (69.68)	37 (10.79)
Facility hours convenient	66 (19.24)	260 (75.80)	17 (4.96)	
Sufficient information is given on the FP method	68 (19.83)	261 (76.09)	14 (4.08)	
Privacy maintained	173 (50.44)	163 (47.52)	7 (2.04)	
Sufficient consultation time	73 (21.28)	255 (74.34)	15 (4.37)	
Easily understood counseling information	72 (20.99)	264 (76.97)	7 (2.04)	
Friendly and respectful staff	104 (30.32)	233 (67.93)	6 (1.75)	
Information confidentiality	89 (25.95)	248 (72.30)	6 (1.75)	
Would come back if FP service is needed again	107 (31.20)	230 (67.06)	5 (1.46)	1 (0.29)
Would recommend the FP services to friends	111 (32.36)	230 (67.06)	2 (0.58)	17 (1.18)

Key: (SA=Strongly Agree A=Agree, D=Disagree, SD=Strongly Disagree)

4.3. Relationship between providers and FP users

This study also established the level of provider-client interactions during the consultation as shown below, most (324; 94.46%) respondents utilizing FP services agreed that the provider explained to them how to use their method of choice effectively. In addition, 314 (91.55%) of the females believed that the provider explained possible effects of the method decided upon effectively, whereas 21 (6.12%) were not convinced that the provider explained possible effects of the method decided upon effectively and 8 (2.33%) accounted for non-response.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Moreover, 320 (93.29%) respondents reported they were told what to do in case they experienced certain problems while utilizing FP services. The findings also showed that only 294 (85.71%) of the females utilizing FP services were told that the method does not protect against STIs and AIDS.

Further, 322 (93.88%) respondents were comfortable asking questions during the consultation with the providers, although only 294 (85.71%) had an opportunity to talk about STIs/AIDS with the provider during consultation. Lastly, 238 (69.39%) respondents were encouraged by the provider to use condoms at the same time as the family planning method they had chosen or were currently using. On the other hand, 246 (71.72%) of the respondents utilized FP services and the provider talked about future fertility intentions (if they would like children in the future).

Table 6. Interaction between Healthcare Providers and Contraceptive Service Users (n = 343)

Variables	Response	n(%)
Provider effectively explained how to use the chosen method	Yes	324(94.46)
	No	12(3.5)
Provider effectively explained possible effects of the chosen method	Yes	314(91.55)
	No	21(6.12)
In the case of the FP problem, was told what to do	Yes	320(93.29)
	No	10(2.92)
Was told the method does not protect against STIs and AIDS	Yes	294(85.71)
	No	38(011.08)
Was comfortable asking questions	Yes	322(93.88)
	No	11(3.21)
STIs/AIDS discussed during the talk with the provider	Yes	294(85.71)
	No	39(11.37)
Encouraged by the provider to use condom alongside the chosen FP method	Yes	238(69.39)
	No	82(23.91)
Talked with the provider about the intention to have children in future	Yes	246(71.72)
	No	85(24.78)

4.4. Factors Associated with the use of FPs

Table 7 indicates a summary of the logistic regression analysis and associated factors influencing the utilization of FP services. According to the findings, the females with high levels of interaction with the providers were about 68% more likely to be satisfied with the FP services as compared to females with low provider-client interactions (OR= 0.68; p=0.021). On the other hand, there was no statistically significant association between satisfaction and facility level, age category, marital status, who referred the females for FP services, the source of FP information, waiting time, cost of service, and level of education.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Table 7. Odds ratio estimates for the satisfaction of the women utilizing FP services n=343

			95% Cl	
Main Effect	Odds Ratio	p-value	Lower	Upper
Age_years				
≤24	1.095178	0.914	0.208522	5.751975
≥ 25	1.72042	0.637	0.18014	16.43076
Marital Status				
Married	0.367711	0.251	0.066687	2.027564
Divorced, Separated, or Widowed	0.217713	0.205	0.020636	2.29696
Level of Education				
No Education	1			
Primary	1.8213	0.572	0.227627	14.57266
Secondary	1.486918	0.7	0.197713	11.18249
University/College	1			
Referred By				
Provider	0.387763	0.278	0.070054	2.146359
Family member	1.6574	0.594	0.258064	10.64455
Others	2.084373	0.352	0.444124	9.782414
Sources of Information				
CHV	1.279969	0.766	0.251406	6.516633
Friend/Family member	0.527624	0.486	0.08736	3.186659
Media	1			
Others	0.222879	0.3	0.013035	3.81104
Waiting Time				
1-2 hrs	1.839332	0.418	0.420797	8.039847
>2 hrs	1			
Others	0.230006	0.259	0.017903	2.954961
Cost of Service (KSh)				
10-80	1			
100-1000	0.238896	0.065	0.052089	1.095654
Provider-client interaction				
Low	1			
Medium	0.079533	**0.021**	0.009276	0.681925
High	0.680063	0.667	0.117336	3.941568
Others	1			

Preprint not peer reviewed

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

5. Discussion

This study involved 343 women seeking family planning services in Siaya County, with the points of participant sampling being the four sub-county hospitals: Bondo, Ukwala, Madiany, and Yala. The distribution of the participants was greatly leaned towards Bondo and Ukwala, which by their physical locations serve much more patients than Madiany and Yala. The mean age of the respondents (21.57 years) was reflective of the global childbearing patterns, particularly in the less developed tropical countries, which have also recorded significant childbearing among teenage girls (Bukenya *et al.*, 2017; New *et al.*, 2017). This was further strengthened by the fact that over 75% of the respondents were married, or were at least previously in marriage. Nearly, all the respondents had at least some formal education, with about half of them having attained secondary and post-secondary education. This reflects a fairly good literacy, that could likely support and enhance the use of family planning methods, especially where instructions need to be issued and followed by the women. This is important as the client's education is related to family planning methods uptake in different settings (Coomson & Manu, 2019; Magala *et al.*, 2017; Obwoya *et al.*, 2018; Ochako *et al.*, 2015). From the different reasons offered for the visit to the facility on the day of the interviews for this study, including coming to receive a contraceptive method, to get a prescription or counseling, having been referred for a contraceptive method for the first time, it is clear that majority of the respondents were aware of what FP services they were looking for at the health facility.

This study reports that the community health volunteers (CHVs) played the most prominent role in referral and information provision, trailed by family and healthcare workers (HCWs), as the media contributed dismally to this effort. While it is expected that the CHVs play a key role, it is of concern that relevant FP information is not obtained by women from the HCWs, given the accuracy and detail in the information shared should be much better when delivered by the latter. It is even more worrying when the family members provide more information on birth control than HCWs, but, again, this may be attributed to the fact that the women stay entirely with the family, and so more likely to access the information with more ease. Still, this could be a reflection of the changing dynamics in the health system (Asaolu *et al.*, 2019; Bukenya *et al.*, 2017), but may also be as a consequence of patient preference, based on satisfaction with the various components of the health care provision system (Alrubaiee & Alkaa'ida, 2011; Bintabara *et al.*, 2018; Brown *et al.*, 2009). It is also worth noting that up to 30% of the clients in this study had been referred for these services by a family member, illustrating the central role the community plays in reproductive health, particularly in birth control.

The level of previous experience with FP methods used among the respondents was only moderate, as just about half of them had visited the health facility previously for FP services, implying nearly half were receiving their very first FP method. It could also mean that a large proportion may not have visited a health facility, but still sourced the FP methods from other sources. While this was not delved into, there is the likelihood many sought services from private chemists/pharmacies, and other related institutions. Similar health-seeking behavior for FP services has previously been reported in different areas (Agyemang *et al.*, 2019; Bawah *et al.*, 2019). The use of contraceptives was in tandem with the quest for them, as just slightly more than half the respondents reported having used a method during their last sexual intercourse, with the most predominant being the condom, which remains the predominant form across different ages in most settings (Butame, 2019; Endriyas *et al.*, 2017; New *et al.*, 2017;

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Ochako *et al.*, 2015). The majority of the respondents who had used a contraceptive method acknowledged that the healthcare provider had asked if they experienced any problem with the contraceptive method they were using, of which about half reported they had experienced varied problems, for which nearly all expressed their satisfaction with how the problem was addressed. This is a key ingredient for the basis for continued and enhanced use of FP methods available at the health facilities (Alrubaiee & Alkaa'ida, 2011; Bintabara *et al.*, 2018; Brown *et al.*, 2009).

The respondents had used the various methods of contraception variably, with implants being cited by close to 100% of the respondents, followed at a significant distance by injectable contraceptives, mentioned by about 50% of the respondents. Condoms were reported to have been used by just about 24%, while pills were only reported by 19% of the respondents. These methods were trailed by IUD (14%) and sterilization (4.95%). This finding illustrates the degree of variation of use in contraceptive methods use, as the majority reported having used various methods over time, a common observation in different settings (Bawah *et al.*, 2019; Magala *et al.*, 2017; Mariam *et al.*, 2018; Obwoya *et al.*, 2018; Ochako *et al.*, 2015). Apart from having been the most used by the respondents, the implant was the predominant service sought by the respondents at the time of the interviews for this study, followed by injectable. While the pills and IUDs recorded a low level of being sought, the outstanding method was the condom, which had earlier been mentioned as the most used in the last sexual encounter, but had registered an overall usage of 24%, but less than 1% of the respondents were seeking services related to condoms. This could have been as a result of the apparent ease of access of the condom in public and private settings, and its concomitant ease of use, albeit not a guarantee all use it properly (Bawah *et al.*, 2019; Coomson & Manu, 2019; Obwoya *et al.*, 2018). Although this study did not specify, it is also possible that the reports on the search for and use of the condom are influenced by the fact that the males play a critical role here, compared to all the other methods mentioned, which almost invariably involve the women alone.

During the visits, the health care provider discussed six types of contraception, namely pill, IUD, injectable, implant, sterilization, condom. The respondents had been variably enlightened on these methods, with only about 25% of the clients seeking contraceptive services reporting the healthcare provider ad discussing with them all the six forms of contraception, and each of the individual contraceptive methods had been discussed with at least 35% of the clients. The implant was discussed with each respondent (100%), followed by IUDs (63.27%), injectable (59.18%), condoms (57.14%), pills (45.24%), and sterilization (38.10%). It is important here to note that the extent of discussion, and thus the information passed, on a particular method did not match either its use or the quest for it by clients. This may point to either the quality of information delivered (Brown *et al.*, 2009; Bukenya *et al.*, 2017; Kitapci *et al.*, 2014) or the clients making a decision based on satisfaction or preference for particular methods (Magala *et al.*, 2017; Nasr & Hassan, 2016; Smith *et al.*, 2017).

This study has established that the majority of the clients using family planning methods had high satisfaction levels. The finding is in agreement with previous reports (Asaolu *et al.*, 2019; Bintabara *et al.*, 2018) that client satisfaction is a very important matter that can only be attained when the clients consistently feel that their expectations are met and that in the instances when the actual product performance or services do not match the clients need, they will feel some degree of tension. Therefore, from the results of this study, there is evidence that in one way or the other, the FP clients were generally satisfied with the services received at the health facilities, thus

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

the likelihood of continued use and compliance with the accompanying instructions. This is thus an indicator of the potential to properly plan family sizes in the study area. The majority of the clients reported having a high interaction level with the healthcare service providers, a likely enhancer of improved use of FP services. Similarly, a study in the USA by Gavin *et al.* (2014) established that good client-provider interaction promoted access to FP services. On the other hand, less than 1% of the clients who experienced low interaction with the providers in one way or the other were not regularly using the FP services. This finding is supported by previous reports which confirmed that lack of FP provider-client interactions pose different challenges mainly to the FP providers (Ashcroft *et al.*, 2017; New *et al.*, 2017; Smith *et al.*, 2017).

According to Diamond-Smith et al. (2018), fear of contraceptive side effects is a major factor that virtually all women consider when deciding whether or not to take contraception. Women's choices of contraceptive methods largely matched their stated preferences for the expected duration of efficacy, but not for anticipated side effects, according to this study. It so stressed the importance for physicians to discuss potential side effects with women during counseling, both to ensure that they choose procedures that are a good fit for their aspirations and to reassure them that common side effects are not hazardous. These words are supported by the study results that moreover, the majority had sufficient consultation time to discuss their contraception needs. Even though the results showed that almost all respondents would recommend the contraceptive services to friends, the few dissatisfied clients were more likely to share their negative experiences with others and were as such less likely to return or continue using the family planning services, and this may affect the quality of performances of the public health facilities in general, as previously established (Mueser *et al.*, 2015).

This study reports that women with high levels of interaction with the providers were about 68% more likely to be satisfied with the FP services as compared to females with low provider-client interactions. However, the study found no association between satisfaction and facility level, age category, marital status, the individual referring the women for FP services, the source of FP information, waiting time, cost of service, and level of education. The findings were consistent with those of Endriyas et al. (2017), who found that overall knowledge of and attitude toward contraceptives, age, residence, number of alive children, and experience of child death, marital status, and deciding number of children are all factors associated with contraception and other FP use. This data, however, contradicts those of Tumlinson et al. (2015), who found that women's satisfaction with FP services in Kenya was influenced by the facility type, management authority, sex of the provider, and the time it took to get care. In general, numerous beliefs that differ by sociodemographic situation affect contraceptive treatment utilization (Alrubaiee & Alkaa'ida, 2011; Bakibinga et al., 2016; Kavle et al., 2014).

Almost all the respondents were able to understand easily the information given during the counseling with the provider, which, among other factors, could have been due to the relatively high literacy reported (Endriyas *et al.*, 2017; Memon *et al.*, 2017; Obwoya *et al.*, 2018; Ochako *et al.*, 2015), quality of information as shared by the healthcare providers (Bukenya *et al.*, 2017; Nantsupawat *et al.*, 2017; Tumlinson, 2016; Tumlinson *et al.*, 2015), or simply client attitude and perception of the information being shared, or the healthcare system (Kavle *et al.*, 2014; Porney, 2015). This was further strengthened by the revelation that the clients felt the information given about the contraceptive methods was sufficient, including their availability at the health facility and about their mechanisms

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

of action and respective side effects, both for the women themselves and their children. The respondents were also advised on what to do in case they experienced certain problems while utilizing FP services. Furthermore, most of the women utilizing FP services were told that not all the methods could protect against STIs and AIDS. Dzomeku *et al.* (2020) argue that the level of provider-client interaction during the consultation is critical for the women who seek the most appropriate FP services. This includes the general environment of the consultation and the communication between provider and user.

In summary, about 75% of the clients confirmed that the waiting time was less than one hour, and more than 65% believed that the health facility was not far from their homes. Facility hours were convenient for over 95% of the respondents, while the information given about the contraceptive method was sufficient for a similar proportion of the respondents. In addition, nearly all respondents were certain that their privacy was maintained, as well as the information they shared with the provider. The respondents also generally asserted that they had sufficient consultation time to discuss their needs.

Furthermore, nearly all respondents were able to easily understand the information given during the counseling by the provider, and nearly all the staff within the facilities were friendly and respectful. Consequently, nearly, all the participants confirmed that they would go back to the same facility if they needed a contraceptive service again, and would as well recommend contraceptive services to others.

Most of the clients recognized that the FP services were availed free of charge, although a small proportion stated that the cost of services ranged from KSh. 100-1000/. The foregoing indicates an overall satisfaction, and this would likely encourage them, as this is always an outstanding determinant of health-seeking behavior (Bintabara *et al.*, 2018; Bukenya *et al.*, 2017; Endriyas *et al.*, 2017; Memon *et al.*, 2017; Ochako *et al.*, 2015).

6. Conclusion and Recommendation

6.1. Conclusion

This study reports that overall, there was optimal use of family planning methods by women in Siaya County. However, information on and referral for these methods was mainly done by community health volunteers, and not healthcare workers at the health facilities. However, the women were generally satisfied with the family planning services offered in health facilities in Siaya County. There was a reasonably short waiting time, the counseling environment was conducive, and the healthcare workers were generally respectful, making the women feel that the information they share would remain confidential. The healthcare workers provided adequate information on the family planning methods available and made it possible for the women to choose the preferred method to use. This study further confirms that women who experience more interaction with the healthcare provider are more likely to report satisfaction, and this is the single most important factor associated with client satisfaction.

6.2. Recommendations

(1) The Ministry of Health, through the individual health facilities and relevant stakeholders, should identify mechanisms of maintaining the satisfaction of women using family planning methods, while ensuring more information is provided by the mainstream healthcare workers.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

(2) The health facilities should ensure a conducive environment that guarantees confidential and adequate interaction between the healthcare provider and FP users, to boost the levels of interaction with the providers in all facilities, thereby enhancing satisfaction with FP services and increasing the likelihood of continued use.

6.3. Suggestion for Further Research

The study recommends further research on the factors contributing to poor interaction with the providers in public health facilities, that may deter the achievement of client satisfaction. Such a study should have a robust qualitative data collection and spread to other lower cadre facilities across the county or in the region.

7. Acknowledgement

Authors are grateful to the first author's study participants and supervisors. This study was conducted out as a component of the Corresponding Author's Study in Partial compliance with the requirements of her Master of Science degree program at Jaramogi Oginga Odinga University of Science and Technology.

Declarations

Source of Funding

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethical Approval

The Board of Postgraduate Studies at JOOUST was approached for ethical clearance and permission to undertake this research. The Jaramogi Oginga Odinga Teaching and Referral Hospital Ethics Review Committee (JOOTRH-ERC) provided ethical approval for the study, and the Bondo Sub County Health Management Team provided additional authorization.

Consent for publication

Authors declare that they consented for the publication of this research work.

Competing Interests Statement

The authors declare no competing financial, professional and personal interests.

Authors' Contributions

All authors equally contributed in data analysis and paper drafting.

References

Jackson, S. (2000). Successfully implementing total quality management tools within healthcare: what are the key actions? International Journal of Health Care Quality Assurance, 14(1), 7.

Farzianpour, F., Emami, A. H., Davari-Tanha, F., Hosseini, S., & Farzanehnejad, A. R. (2010). Educational programs' quality assessment based on graduates' comments. Iranian Red Crescent Medical Journal, 12(3), 6.

Farzianpour, F., Kazem Mohammad, K., Abbas Rahimi Foroushani, A. R.,, Alirezaei, S., & Manafi, F. (2015). A study on the feasibility of total quality management model and the awareness and attitude of the managers of health care. Health, 7(1), 7.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Agyemang, J., Newton, S., Nkrumah, I., Tsoka-Gwegweni, J. M., & Cumber, S. N. (2019). Contraceptive use and associated factors among sexually active female adolescents in Atwima Kwanwoma District, Ashanti region-Ghana. Pan Afr Med J, 32, 182. doi: 10.11604/pamj.2019.32.182.15344.

Alrubaiee, L., & Alkaa'ida, F. (2011). The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality-patient trust relationship. International Journal of Marketing Studies, 3(3), 15.

Asaolu, I., Nuno, V. L., Ernst, K., Taren, D., & Ehiri, J. (2019). Healthcare system indicators associated with modern contraceptive use in Ghana, Kenya, and Nigeria: evidence from the Performance Monitoring and Accountability 2020 data. Reprod Health, 16(1), 152. doi: 10.1186/s12978-019-0816-4.

Ashcroft, N., Shelus, V., Garg, H., McLarnon-Silk, C., & Jennings, V. H. (2017). Implementation of CycleTel Family Advice: an SMS-based service to provide family planning and fertility awareness information in India. Mhealth, 3, 20. doi: 10.21037/mhealth.2017.05.01.

Bakibinga, P., Mutombo, N., Mukiira, C., Kamande, E., Ezeh, A., & Muga, R. (2016). The Influence of Religion and Ethnicity on Family Planning Approval: A Case for Women in Rural Western Kenya. J Relig Health, 55(1), 192-205. doi: 10.1007/s10943-015-0030-9.

Balasubramanian, M. (2016). Total Quality Management [TQM] in the Healthcare Industry – Challenges, Barriers and Implementation Developing a Framework for TQM Implementation in a Healthcare Setup. Science Journal of Public Health, 4(4), 8. doi: 10.11648/j.sjph.20160404.11.

Bawah, A. A., Asuming, P., Achana, S. F., Kanmiki, E. W., Awoonor-Williams, J. K., & Phillips, J. F. (2019). Contraceptive use intentions and unmet need for family planning among reproductive-aged women in the Upper East Region of Ghana. Reprod Health, 16(1), 26. doi: 10.1186/s12978-019-0693-x.

Bintabara, D., Ntwenya, J., Maro, II, Kibusi, S., Gunda, D. W., & Mpondo, B. C. T. (2018). Client satisfaction with family planning services in the area of high unmet need: evidence from Tanzania Service Provision Assessment Survey, 2014-2015. Reprod Health, 15(1), 127. doi: 10.1186/s12978-018-0566-8.

Brown, C. E., Wickline, M. A., Ecoff, L., & Glaser, D. (2009). Nursing practice, knowledge, attitudes and perceived barriers to evidence-based practice at an academic medical center. J Adv Nurs, 65(2), 371-381. doi: 10.1111/j.1365-2648.2008.04878.x.

Bukenya, J. N., Mulogo, E., Kibira, S. P. S., Muhumuza, C., & Atuyambe, L. M. (2017). Health facilities' readiness to provide friendly reproductive health services to young people aged 10-24 years in Wakiso district, Uganda. Glob J Reprod Med, 2(3). doi: 10.19080/GJORM.2017.02.555588.

Butame, S. A. (2019). The prevalence of modern contraceptive use and its associated socio-economic factors in Ghana: evidence from a demographic and health survey of Ghanaian men. Public Health, 168, 128-136.

Cleary, P. D., & McNeil, B. J. (1988). Patient satisfaction as an indicator of quality care. Inquiry, 25(1), 25-36.

Coomson, J. I., & Manu, A. (2019). Determinants of modern contraceptive use among postpartum women in two health facilities in urban Ghana: a cross-sectional study. Contracept Reprod Med, 4, 17. doi: 10.1186/s40834-019-0098-9.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Diamond-Smith, N., Warnock, R., & Sudhinaraset, M. (2018). Interventions to improve the person-centered quality of family planning services: a narrative review. Reprod Health, 15(1), 144. doi: 10.1186/s12978-018-0592-6.

Dzomeku, V. M., Boamah Mensah, A. B., Nakua, K. E., Agbadi, P., Lori, J. R., & Donkor, P. (2020). Developing a tool for measuring postpartum women's experiences of respectful maternity care at a tertiary hospital in Kumasi, Ghana. Heliyon, 6(7), e04374. doi: 10.1016/j.heliyon.2020.e04374.

Endriyas, M., Eshete, A., Mekonnen, E., Misganaw, T., Shiferaw, M., & Ayele, S. (2017). Contraceptive utilization and associated factors among women of reproductive age group in Southern Nations Nationalities and Peoples' Region, Ethiopia: cross-sectional survey, mixed-methods. Contracept Reprod Med, 2, 10.

Gavin, L., Moskosky, S., Carter, M., Curtis, K., Glass, E., Godfrey, E., & Zapata, L. (2014). Providing quality family planning services: recommendations of CDC and the US Office of Population Affairs. Morbidity and Mortality Weekly Report: Recommendations and Reports, 63(4), 54.

Jackson, S. (2000). Successfully implementing total quality management tools within healthcare: what are the key actions? International Journal of Health Care Quality Assurance, 14(1), 7.

Kavle, J., Mehanna, S., Khan, G., Hassan, M., Saleh, G., & Galloway, R. (2014). Cultural beliefs and perceptions of maternal diet and weight gain during pregnancy and postpartum family planning in Egypt USAID Report. Washington DC: USAID.

Kitapci, O., Akdogan, C., & Dortyol, I. T. (2014). The impact of service quality dimensions on patient satisfaction, repurchase intentions and word-of-mouth communication in the public healthcare industry. Procedia-Social and Behavioral Sciences, 148, 9.

Magala, I., Onega, L., Nalubega, R., & Serunjogi, P. (2017). Factors influencing contraceptive uptake among sexually active HIV positive clients in TASO Masaka. Uganda. J Public Health Policy Plan, 1(2), 4.

Mariam, T. G., Kebede, Y., Shibru, A., & Birhanu, A. (2018). Utilization of reversible long acting contraceptive methods and associated factors among women getting family planning service in governmental health institutions of Gondar City, Northwest Ethiopia 2015. Austin J Public Health Epidemiol, 5(1), 7.

Memon, A., Hamid, S., & Kumar, R. (2017). Client Satisfaction And Decision Making Amongst Females Visiting Family Planning Clinics In Hyderabad, Pakistan. J Ayub Med Coll Abbottabad, 29(4), 626-629.

Mueser, K. T., Penn, D. L., Addington, J., Brunette, M. F., Gingerich, S., Glynn, S. M., Lynde, D. W., Gottlieb, J. D., Meyer-Kalos, P., McGurk, S. R., Cather, C., Saade, S., Robinson, D. G., Schooler, N. R., Rosenheck, R. A., & Kane, J. M. (2015). The NAVIGATE Program for First-Episode Psychosis: Rationale, Overview, and Description of Psychosocial Components. Psychiatr Serv, 66(7), 680-690. doi: 10.1176/appi.ps.201400413.

Mutemwa, R., Mayhew, S. H., Warren, C. E., Abuya, T., Ndwiga, C., & Kivunaga, J. (2017). Does service integration improve technical quality of care in low-resource settings? An evaluation of a model integrating HIV care into family planning services in Kenya. Health Policy Plan, 32(suppl_4), iv91-iv101. doi: 10.1093/heapol/czx090.

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226

Nantsupawat, A., Kunaviktikul, W., Nantsupawat, R., Wichaikhum, O. A., Thienthong, H., & Poghosyan, L. (2017). Effects of nurse work environment on job dissatisfaction, burnout, intention to leave. Int Nurs Rev, 64(1), 91-98. doi: 10.1111/inr.12342.

Nasr, E., & Hassan, H. (2016). Association between quality of family planning services and client's satisfaction level in maternal and child health centers in Port Said City J Nurs Educ Pract, 6(1), 15.

New, J. R., Cahill, N., Stover, J., Gupta, Y. P., & Alkema, L. (2017). Levels and trends in contraceptive prevalence, unmet need, and demand for family planning for 29 states and union territories in India: a modelling study using the Family Planning Estimation Tool. Lancet Glob Health, 5(3), e350-e358. doi: 10.1016/S2214-109X(17)30033-5.

Obwoya, J. G., Wulifan, J. K., & Kalolo, A. (2018). Factors influencing contraceptives use among women in the Juba city of South Sudan. International Journal of Population Research, 1, 7. doi: 10.1155/2018/6381842.

Ochako, R., Mbondo, M., Aloo, S., Kaimenyi, S., Thompson, R., Temmerman, M., & Kays, M. (2015). Barriers to modern contraceptive methods uptake among young women in Kenya: a qualitative study. BMC Public Health, 15, 118. doi: 10.1186/s12889-015-1483-1.

Porney, M. (2015). Patient partnership in quality improvement of health care services: Patients inputs and challenges faced. Patient Experience Journal, 2(1), 16.

Smith, E., Charantimath, U. S., Wilson, S. F., & Hoffman, M. K. (2017). Family planning in Southern India: A survey of women's attitudes. Health Care Women Int, 38(10), 1022-1033. doi: 10.1080/07399332.2017.1356306.

Tumlinson, K. (2016). Measuring Quality of Care: A Review of Previously Used Methodologies and Indicators. Working Paper Two of the Measuring and Monitoring Quality of Services and Quality of Care Project. New York: Population Council.

Preprint not peer reviewed

This preprint research paper has not been peer reviewed. Electronic copy available at: https://ssrn.com/abstract=4080226