Title: Identification of Dimensions of Client Satisfaction with Comprehensive Abortion Care (CAC)

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Abstract

Background

Satisfaction with health services has been recognized as one of the most vital indicators of quality. It has been studied and measured extensively as part of service quality and as a stand-alone construct. However, there has been limited or no studies from Ethiopia that identified dimensions of client satisfaction with CAC services. This study aimed to identify underlying dimensions of CAC client satisfaction and determine the relative importance of these dimensions.

Methods

The study utilized qualitative and quantitative methods. In-depth interviews with 16 clients were conducted at the time of discharge to capture information about their experience for developing a scale. Refinement of the scale was done using expert review, pilot study, and preliminary scale analysis. A total of 450 clients from 8 facilities completed survey using the refined instrument. Principal component exploratory factor analysis (EFA) was conducted to identify dimensions of CAC client satisfaction. Regression analysis was used to determine the relative importance of identified dimensions.

Results

A scale containing 40 items was developed. The net effect of refinement process resulted in a 26-items scale. Factor analysis of the 26 items indicated that the construct consisted of five components accounting for 60.48 % of the variance. All items showed factor loadings above 0.4. Standardized regression coefficients demonstrated that components have the following order of importance: art of care (0.410), physical environment (0.366), information (0.269), quality of care (0.244), and privacy and confidentiality (0.197) .

Conclusions & Recommendations

The findings provided support that client satisfaction with CAC is a multidimensional construct largely influenced by five major components. In improving the overall quality of CAC services, attention should be given to interpersonal discourse first, then to the pleasantness of physical environment, followed by offering enough information related to the procedure, securing clients' privacy during counseling and treatment, and technical quality of the providers.

Keywords

Comprehensive abortion care, Satisfaction, Factor analysis, Factors.

Background

Despite the advancements in technologies, health evidence and human rights justification for providing safe, comprehensive abortion care (CAC), unsafe abortion remains major public health concern . According to World Health Organization (WHO), each year, 22 million unsafe abortion are performed; nearly all of them (98%) occur in developing countries. Approximately, 47, 000 deaths are due to unsafe abortion complications. In addition, 5 million women are estimated to suffer disability because of complication due to unsafe abortion [1, 2]. In developing countries, nearly 13% of the maternal mortality is caused by unsafe abortion [2]. Ethiopia is one of the developing countries with the highest maternal mortality where unsafe abortion account for 32% of all maternal deaths [3].

According to WHO, almost every one of the deaths and morbidities could have been prevented thorough effective sexual education, family planning services, and provision of safe, legal induced abortion and treatment of abortion complications [2]. For abortion care to achieve its goal, continuous improvement strategies need to be in place as part of maintaining service quality to meet the needs of health care providers, as well as health care needs and rights of women [4]. Studies have shown that poor service quality results low acceptability of legal abortion services that may lead women to seek care from unqualified providers or to self-induce abortions, resulting in abortion-caused morbidity and mortality [5]. Despite the expansion of safe and legal abortion services in Ethiopia, a study conducted in 2008 estimated that one in ten pregnancies would end in abortion, and 73% of these abortions assumed to be performed unsafely outside health facilities [6]. The risk of death following unsafe abortion procedures is by far higher than that of an abortion carried out professionally [7]. Service quality may also influence such factors as clients' interest to return to abortion care and to practice post abortion services. If clients are treated poorly, they may not even return for follow-up visits and ultimately hurt their health condition [5]. Moreover, clients may share their bad experiences with friends and family and create a negative reputation for legal services in the health facilities that may lead women to look for illegal abortions [8].

To make abortion services according to the needs of women their by avoid women dissatisfaction, client-centered approach has emerged as a critical component of service quality improvement tactics. The World Health Organization recommends that clients' perspectives of the quality of services be assessed as part of routine monitoring and evaluation of abortion services [2]. Health care managers thus need to take clients' opinion into account when designing service quality improvement strategies [9] . Additionally, Patient or client satisfaction, because of its significance to reveal compliance, is proved to be the pertinent indicator that shows the quality of health care services [10]. Therefore, evaluating client satisfaction is a legitimate approach to distinctly differentiate factors to be controlled for advancing quality of CAC services [11].

So far studies done in Ethiopia have focused mainly on the cause, magnitude, and distribution of abortion. In addition, while several studies, both in developing and developed countries, have examined the dimensions of patients' satisfaction with other types of healthcare services, there is only limited information available about factors contribute to clients' satisfaction or dissatisfaction with CAC from Ethiopia. This study is therefore believed to narrow such an information gap and enable to identify major areas of service improvement of CAC from clients' perspectives. Therefore the objective of this study was to identify the underlying dimensions of client satisfaction with CAC and determine the relative importance of these dimensions.

Methods

Study participants and location

This facility based cross-sectional study utilized formative qualitative and quantitative methods. The study was conducted in Addis Ababa city administration, between the months of November to January, 2014. Health facilitates were chosen with the main criteria of the presence of CAC service and high caseloads. In order to minimize bias related to facility selection, a combination of health facilities administered by government and non-government organizations were selected . Four from private clinics, two from public health facilities, and two from Marie stopes clinics were selected.

Ethics approval was sought and obtained from Addis Ababa University, School of psychology using the research proposal and all ethical standards for human subjects research were adhered to throughout the study period. For the formative qualitative study, sampling was generally purposive with maximum variation for participants and selection of rich sources of information. Hence, 16 clients (2 from each facility) were interviewed at the time of discharge. For quantitative study sample size was determined after considering varying opinions and several guiding rules of thumb suggested by various scholars , such as the rule of thumb that suggests having at least 300 cases for factor analysis, and the recommendation that adequate sample size can be determined using 10:1 (sample to variable) ratio [12,13,14]. Accordingly, the total sample size was 450. This sample size allocated proportionally for selected health facilities based on the number of clients getting the service during the month prior to the study. All women, getting the service from these eight facilities within data collection period were approached, screened for eligibility, and asked if they would like to participate until the required number was reached. Women getting abortion care by any method of uterine evacuation at any weeks of gestation were included in the study. women who were severely sick and unable to respond were excluded from the study.

Data collection

For qualitative study, the interviewer used open-ended questions to elicit clients' comments about the positive and negative aspects of care received during the procedure. The questionnaire was designed in English, translated into Amharic and, then administered to clients. The interviews were

assisted by a note taker and supported by a tape recorder. Concepts & points captured from the reviewed literatures that were pertinent to the topic and responses obtained from clients were filtered, organized, summarized, and narrated to develop items of a scale measuring satisfaction with comprehensive abortion care. As a result, initially, a scale containing 40 items was developed. This initial item pool was shown to a focus group of eight clients who provided their opinions about the appropriateness and comprehensiveness of items. The scale had also passed thorough such refinement process as expert review, pilot study, and preliminary scale analysis. The net effect of these refinement processes resulted in a 26-items scale.

Hence, the final questionnaire in the quantitative study basically contained two parts. First part included sociodemographic and care-related variables (such as age, marital status, educational level, facility type, diagnosis type, procedure type, and gestational weeks). Second part contained items representing all steps followed from reception until discharge from a facility. Clients were asked to respond by indicating their level of satisfaction on a four-point 'Likert-type scale', ranging from "strongly disagree " (1) to "strongly agree" (4). During data collection, participants were provided with clear information about the purpose and benefit of the study and what would be expected of them and asked if they are willing to participate or not. Verbal informed consent was obtained from clients who participated in the study and their right of refusal to participate in or withdrawing from the study at any stage was maintained. Confidentiality of responses was maintained, and personal privacy and cultural norms was also respected properly. Eight health care professionals, who were not working on CAC related services collected the data using face-to-face interview.

Data analysis

Data were entered in to Epi Info 3.5.1 and exported to SPSS 18.0 for statistical analysis. Data exploration was done to assess the general feature of the data. After exploration, the mean, median, standard deviation, and total scores for the satisfaction scale was computed. Item scale correlation, communality, and factor loadings were also computed. Mean satisfaction scores were used to assess level of satisfaction among different groups of women. Data were presented using tables and graphs accordingly.

To extract dimensions underlying client satisfaction with CAC three statistical techniques were used: (1). Principal component exploratory factor analysis (EFA) using varmax rotation, (2).Scree plot graph, (3) Monte Carle parallel analysis. In factor analysis, only those factors that explain an appreciable amount of variance in the data, factors with eigenvalues greater than 1.0, were retained. Prior to the extraction of the factors, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were employed to assess the suitability of data for factor analysis. The identified dimensions were then used as inputs in regression analysis to determine their relative contribution in predicting client's satisfaction with CAC. The problem of multicollinearity (correlation between the independent variables) has been checked thorough variance inflation factor (VIF) and tolerance limit, which ideally must be below 10 and

above 0.2 respectively. Satisfaction differences between levels of the selected socio-demographic and care-related characteristics were tested using *t*-test and analysis of variance, p-values less than 0.05 were considered to be statistically significant for all cases.

Results

Sample Characteristics

Of the 450 women approached to participate, 15 did not meet eligibility criteria, 35 declined, and 400 (88.9%) completed the interview. The mean age of clients was 25.3 $\pm$ 4.9 years. While 160 (40%) were from private clinics, Public facilities and Marie Stopes clinics each contributed 120 (30%) of the respondents. Majority of the cases (89%) were first trimester, safe induced abortion (81%) and with education ranging from no formal education (12.5%) to University/College Graduate (16.2%), high school graduates constituted the highest proportion (33.5). Almost half (50%) of the cases were done using Medical Abortion (MA) and the rest were done using Manual Vacuum Aspiration (MVA). In terms of marital status close to 50% of the participants were living with their partner (Table 1).

Although clients used the full range of responses (1 to 4) to each of the 26 items of satisfaction scale, the means of items were relatively high, ranging from 2.86 to 3.50 out 4 (standard deviations from 0.59 to 0.92), and majority of them (65%) were skewed toward upper tail indicating that a great majority of clients have given high satisfaction ratings to the services they had got .The mean of total scores of the entire satisfaction scale was 85.06 (SD=9.57, median=84.00), with a range between 48 and 96. Levels of disaggregation and their descriptive statistics on satisfaction for Age group, Facility Type, Gestational weeks, marital status, Diagnosis, and procedures type are reported in Table 1

Satisfaction among different groups of women

We used t-test and one way ANOVA to compare mean satisfaction score across socio-demographic characteristics of clients. Table 1 contains the results of this section. As it demonstrates, a significant relationship was established between type of facility, procedure type, gestational weeks ($p<0.005$). As such, there was no significant difference observed on the satisfaction score between age group, marital status, level of education and type of diagnosis ($p> 0.05$).

The mean satisfaction score was significantly ($P<.05$) higher for those clients whose procedure was done using MVA (M=86.51) than whose procedure was done using MA(M=83.53). By the same talk, the mean satisfaction score was significantly ($P<.05$) higher for those clients whose gestational weeks was beyond 12 weeks (M=89.50) than those within 12 weeks (M=84.51). The research also found that clients from public facilities (M=89.61) scored a significantly high satisfaction ($P<.05$) than private (M=83.39) and Maries Stopes (M=82.73)

clinics clients. Figure 2 depicts these differences. However, no significant difference was observed on the mean satisfaction scores between clients of private and Marie Stopes clinics.

Extraction of dimensions

The KMO value found to be 0.838, indicating that factor analysis was appropriate for these data. The Bartlets test of Spherity was statistically significant (X^2=4879.130, df=325, P<0.000), showing that the inter-item correlation matrix was not an identity and factor analysis was appropriate for these data.

Using factor analysis six factors with eigenvalues ranging from 1.030 to 7.167 were extracted. The total percentage of variance explained by these factors was 64.34%. However, the Scree plot method showed a clear separation between factors 5 and 6, where the scree appears to begin, suggesting a five-factor solution (Figure 1). The observed eigenvalues of the six factors identified by factor analysis were compared with values derived by using Monte Carlo PCA parallel analysis method, only eigenvalues of the first five factors exceeded their counterparts, indicating that the last (6th) factor should be ignored. This finding has showed five-factor solution would be more appropriate. This result coincides with the one obtained from investigation of Scree plot graph.

As a whole, though the exploratory principal component analysis extacted six factors with eigenvalues greater than 1, examination of the scree plot and Monte Carlo PCA parallel analysis showed that a five-factor solution would be more appropriate. Since the two methods yield the same result and are generally recognized as stronger techniques in determining the number of factors to be retained, we are convinced to take the five factor solution as an appropriate solution. Hence, once again, factor analysis was done by fixing the number of factors to be extracted to be equal to five. By doing so, the five factors together were found to explain 60.48% of the total variance in satisfaction scores (Table 2).

The five components were labeled as Art of care, physical Environment, Information, Privacy and confidentiality, and quality of care.

The *Art of Care* consisted of 8 items with factor loadings ranging from 0.625 to 0.781. Items in this component emphasized on the importance of interpersonal manner of the provider on client satisfaction with the care. This factor indicated that the way a provider communicates with his or her client has a great impact on satisfaction or dissatisfaction of a client by the service. It included statements of being welcoming, caring, and showing respect.

The *physical Environment* consisted of 5 items with factor loadings ranging from 0.685 to 0.852. Items in this dimension focused on satisfaction with the physical surroundings in which care is delivered. It defined sources of satisfaction with the environment of care including general pleasantness, comfort, attractiveness, and conformableness of the procedure as well as waiting room and cleanness of facilities and equipment.

The *Information* component consisted of 5 items with factor loadings ranging from 0.665 to 0.774. Statements in this factor stated the need to deliver enough information about the care, including follow-up care and post abortion services. It also reflects the need to simplify things to clients by offering the desired information related to the procedure.

The *quality of care* comprised of 4 items, having factor loadings from 0.538 to 0.796. This dimension which also describes the availability of adequate medical instrument and supplies, assessed clients' perceptions on competence of service providers and their adherence to high standards of diagnosis and treatment.

The *Privacy and confidentiality* comprised of 4 items, having factor loadings ranging from 0.631 to 0.810. Those items described how client's privacy was secured while she was being counseled and treated .

Weight of components

The simple linear regression model was used to investigate the relationship between the five components and the total scale. The over all model found to be statistically significant ($F=84682.744$, $P< 0.000$). Since the coefficients of components are different, all components of the scale cannot be considered as having equal power in determining individuals' satisfaction with the service. As a result, simple summation of the scores of the components couldn't determine the total satisfaction score. As is evident in table 3 Standardized Beta Coefficients have provided the following order of importance: art of care, physical environment, information, privacy and confidentiality, quality of care (also see figure 3). In calculating the regression coefficients of the dimensions, care has been taken that multicollinnearity was reduced to the minimum. The VIF values were all well below 10 and the tolerance statistics all well above 0.2 ; therefore, we can safely conclude that there was no collinearity with in the data.

Discussion

Satisfied clients adhere to follow up care and continue to use health services. Hence, a focus on client satisfaction would be a concrete approach for health facilities to evaluate certain aspects of quality and to use the results to serve client needs more effectively. Such a client focus would also assist health care managers to provide quality services, ensure higher client satisfaction and eventually increase institutional performance in improving community health outcomes.

The clients who took part in this study reported that they were generally highly satisfied with the care. This is consistent with the findings of the study conducted in Oromia and Amhara regional states of Ethiopia that majority of clients rated high satisfaction with services they have been delivered [15, 16, 17].This skewed distribution of satisfaction scores toward the upper tail indicates that the service delivery was reasonably good from the customers' standpoint.

However, there was variability in the degree of satisfaction depending on the socio-demographic and care-related characteristics. The fact that clients were more satisfied in public health facilities than private and Maries Stopes clinics could perhaps be related with cost of the care. Studies have shown that higher patient satisfaction is associated with lower health care expenditures [18, 19]. This research showed that the cost incurred for CAC services is too low in public health facilities compared to private and Marie stopes clinics service costs, thus getting a relatively comparable services with minimum charge could make clients more satisfied. Another probable reason for this could be expectation, service expectation of clients in public health facilities could be limited compared to what they actually have got, the inverse relationship between satisfaction and expectation was pronounced by the findings of Ware et al (1983) [20]. The reason for higher satisfaction at late weeks of gestation could be due to clients' perception, clients with late abortion may expect that their procedures would be more complicated and painful than early ones . So, clients would feel more relief for not to be pregnant again and hence be more satisfied than their counterparts. The finding, that there is no satisfaction difference between younger and older clients contradicts with the findings of other studies conducted in other countries [21]. This could probably be due to the differences in the culture and health care systems of the countries.

Consumers of CAC services base their perceptions of service quality on five dimensions, and rate them in the following order of importance: Art of Care, Physical Environment, Information, Privacy and Confidentiality, and Quality of Care. This evidence showed that satisfaction with CAC is a multidimensional construct. In previous researches, it has been recognized that patient satisfaction with health care has several facets [20]. The identified dimensions are also found to be in line with other studies [20, 22] .

Satisfaction with abortion care was found to be strongly associated with art of care. This is all about provider's interpersonal communication which plays a fundamental role in attracting the attention of several clients. Women rated provider’s determination to respect their dignity and help them feel comfortable. As previous studies showed [21, 23], such respectful treatments as provider's patience, concern, and attentiveness found to have a crucial impact on clients' satisfaction with the service. Given the sensitive nature of abortion care and the fact that women may feel vulnerable to receiving judgmental treatment, it is not surprising that this dimension appeared to be the first and most important factor to be considered.

As in other studies [24] , pleasantness of the physical environment around the procedure room was found to be of high importance to clients receiving the care. Factors such as attractiveness, cleanness, and comfortableness of the procedure room as well as the waiting room and tidiness of facilities and equipment contributed secondly to the overall satisfaction of women with the service, suggesting that these factors should be targeted in quality improvement efforts.

Women have a right to be fully informed of their options for health care by properly trained providers, including information about the likely benefits and potential adverse effects of proposed procedures and available alternatives. The perceived adequacy of information women received was found to be the third important factor associated with women's overall satisfaction, indicating that provision of all the necessary information is an essential part of high-quality abortion services. Information must be complete, accurate and easy to understand, and be given in a way that facilitates a woman being able to freely give her fully informed consent, and is sensitive to her needs and perspectives [25].

Privacy and confidentiality emerged as the fourth most important dimension in determining women's satisfaction with the service. Services should be delivered in a way that guarantees women's right to privacy. The fear that confidentiality will not be kept may discourage clients, particularly adolescents and unmarried women, from seeking safe and legal abortion services, and may drive them undergo unsafe abortion. Privacy and confidentiality is a key principle of medical ethics and must be guaranteed [17]. Health care providers therefore should guarantee that facilities provide privacy to women during conversations with providers, as well as for actual services. They have also a responsibility to protect women's medical information against unauthorized disclosures.

The last and least important dimension found to be technical quality of providers. In spite of the fact that clients may have an imperfect knowledge to appraise the technical skills of their providers [2], it is fascinating that their trust in the technical competence of their providers was associated with their overall satisfaction ratings. Since women may have experienced illegal abortions and or may have heard stories of unsafe abortions, ensuring the technical competence and confidence of the abortion provider through qualified trainings would be very essential in this context.

The strength of this study is that suggestions given by known instrument development studies [20,26] have successfully been integrated in developing a scale measuring client satisfaction with CAC services, resulting an instrument which had a very good reliability and validity. This study has several limitations. Firstly, it was conducted within narrow scope of study area and population. Secondly, data were gathered at some specific point in time, so the study contains the typical limitations related with cross-sectional research designs. For instance, the model characterized by the static nature of service assessment and the results are confined to a specific point of time.

Conclusions and recommendations

Despite the aforementioned limitations , the implications of this research are highly supportive to the decision makers who are offering such health care service in the country.

Particularly, it improves the understanding of health care managers and providers on how customers evaluate quality of CAC services. The findings suggest that customers evaluate CAC services at an overall as well at dimensional levels. Therefore, In improving the overall quality of CAC services, health care managers should give attention to the client-provider interaction first, then to the pleasantness of physical environment, followed by offering adequate information related to the procedure, securing clients' privacy during counseling and treatment, and technical quality of the providers.

List of abbreviations

WHO Word Health Organization

FMOH Federal Ministry of Health

CAC Comprehensive Abortion Care

PCA Principal Component Analysis

EFA Exploratory Factor Analysis

MA Medical Abortion

MVA Manual Vacuum Aspiration

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

BM contributed to study conception and design, data collection, analysis and interpretation and drafting and revising the manuscript. TA participated to the study design, data interpretation, and revising the manuscript. All authors participated in giving final approval of the version to be published.

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References:

1. World Health Organization. Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008; 2011.

2. World Health Organization. Safe Abortion: Technical and Policy Guidance for Health Systems. Geneva; 2012.

3. Federal Ministry of Health of Ethiopia. Technical and Procedural Guidelines for Safe Abortion Services in Ethiopia. Addis Ababa; 2006.

4. EngenderHealth, Ipas. COPE® for comprehensive abortion care: a toolbook to accompany the COPE handbook. EngenderHealth Quality Improvement Series; 2009.

5. Billings D, Fuentes Velásquez J, Pérez-Cuevas R. Comparing the quality of three models of post abortion care in public hospitals in Mexico City. International Family Planning Perspectives. 2003; 29(3):112–120.

6. Singh S, Fetters T, Gebreselassie H, Abdella A, Gebrehiwot Y, Kumbi S, et al. The estimated incidence of induced abortion in Ethiopia, 2008. Int Perspect Sex Reprod Health. 2010;36(1):16-25.

7. Gebreselassie H, Fetters T, Singh S, Abdella A, Gebrehiwot Y, Tesfaye S, et al. Caring for women with abortion complications in Ethiopia: national estimates and future implications. Int Perspect Sex Reprod Health. 2010;36(1):6-15.

8. Jewkes RK et al. Why are women still aborting outside designated facilities in metropolitan South Africa? BJOG. 2005;112(9):1236–1242.

9. Kathryn AM, David AC, Susan M G. The Role of Clinical and Process Quality in Achieving Patient Satisfaction in Hospitals. Decision Sciences. 2004;35(3):349-369.

10. Hall JA, Dornan M C .What patients like about their medical care and how often they are asked: A meta-analysis of the satisfaction literature. Social Science and Medicine. 1988b;27(9):935-939.

11. Elaine Y, Gail CD, Richard R. The Measurement of Patient Satisfaction Journal Nurse Care Quality. 2002;16(4):23–29

12. Pett M, Lackey N, Sullivan J . Making Sense of Factor Analysis: The use of factor analysis for instrument development in health care research. California: Sage Publications Inc; 2003

13 Tabachnick B, Fidell L. Using Multivariate Statistics. 4th ed. New York: Aiiyn and Bac; 2001

14. Comrey A, Lee H. A First Course in Fclctor Ancllysis. 2nd ed. Hil lsdale: Lawrence Erlbaum Associates; 1992

15. Solomon K, Yilma M, Hailu Y. Quality of post-abortion care in public health facilities in Ethiopia; 2003.

16. Hu D et al. Cost-effectiveness analysis of alternative first-trimester pregnancy termination strategies in Mexico City. BJOG. 2009; 116(6):768–779.

17. Lewis JR. Patient views on quality care in general practice: literature review, Social Science & Medicine. 1994;39(5):655–670.

18. Joshua J F, Anthony FJ, Klea DB, Peter . The Cost of Satisfaction : A National Study of Patient Satisfaction, Health Care Utilization, Expenditures, and Mortality; 2012.

19. Marlene M, Elisabeth D, Margareta L. Women and men's satisfaction with care related to induced abortion; 2012

20. Ware JE, Snyder MK, Wright R, Davies AR. Defining and measuring patient satisfaction with medical care: Evaluation and Program Planning. 1983;6:247-263.

21. Crow R, Gage H, Hampson . The measurement of satisfaction with healthcare: implications for practice from a systematic review of the literature. 2002;6:1–245.

22. Risser N. Development of an instrument to measure patient satisfaction with nurses and nursing care in primary care settings. Nursing Research. 1975; 24:45- 52.

23. Donabedian A. The Definitions of Quality and Approaches to Its Assessment. Health Administration Press. Chicago; 2003.

24. Wiebe ER, Sandhu S. Access to abortion: what women want from abortion services. Journal of Obstetrics and Gynaecology .Canada.2008;30(4):327–331.

25. Sedgh G et al. Induced abortion: incidence and trends worldwide from 1995 to 2008. Lancet. 2012;379:625–632.

26. DeVellis RF. Scale Development: Theory and applications .2nd ed. Thousand Oaks, CA: Sage; 2003.

Table 1. Clients characteristics and their mean satisfaction scores (N=400).

Characteristic	N (%)	Mean(SD)	P*
Age (n = 400)			0.127
≤ 24	185 (45.8)	84.27 (9.86)	
>25	215 (54.2)	85.73 (9.28)	
Diagnosis Type (n = 400)			0.51
Induced Abortion	325 (81.3)	85.21 (9.41)	
Post Abortion Care	75 (18.7)	84.40 (10.24)	
Gestational Weeks (n = 400)			< 0.001
First Trimester	356 (89.0)	84.51 (9.22)	
Second Trimester	44 (11.0)	89.50 (11.18)	
Procedure Type (n = 400)			0.002
Medical abortion (MA)	195 (47.9)	83.53 (9.35)	
Manual Vacuum Aspiration (MVA)	205 (52.1)	85.51 (9.57)	
Facility Type (n = 400)			< 0.001
Public	120 (30.0)	89.61 (11.54)	
Private	160 (40.0)	83.39 (8.06)	
Marie Stopes	120 (30.0)	82.73 (7.53)	
Relationship Status (n = 400)			0.582
Married	199 (49.75)	86.32 (9.64)	
Living with partner	201 (50.25)	83.52 (9.21)	
Educational level (n = 400)			0.203
No formal education	49 (12.5)	87.08 (9.44)	
Primary school	89 (22.7)	86.97 (9.00)	
Secondary school	135 (33.5)	84.51 (9.93)	
Technical school	61 (15.0)	83.48 (8.78)	
University/College Graduate	66 (16.2)	83.56 (9.91)	

Table 2. Results of exploratory factor analysis (N=400)

Rotated Component Matrix[a]					
	Component				
	1	2	3	4	5
The health care provider explained my procedure/care to me in a way that I easily understood.	.781				
The staff at this facility was welcoming and made me feel comfortable with my care.	.768				
The health care provider didn't encourage me to talk about all my problems and concerns.(R)	.759				
The health care provider treated me in a very friendly and courteous manner.	.719				
The health care provider didn't show respect to what I have to say.(R)	.716				
The health care provider seemed to want get read of me as soon as possible.(R)	.707				
The health care provider really cares about me as a person.	.691				
The health care provider has asked me if I have questions and concerns about the procedure.	.625			.331	
I feel the atmosphere of the procedure room is good.		.852			
The Procedure room was not comfortable and attractive.(R)		.823			
Facilities and equipment around the procedure area are not tidy.(R)		.763			
The health facility is not conveniently located.(R)		.750			
The waiting room seats are uncomfortable.(R)		.685			
Staffs at the reception ease me to obtain all information I need about the service.			.774		
There are clear signs and direction to indicate where to go in the service areas.			.766		
The health care provider didn't tell me about follow-up care for when I get home.(R)			.717		
The health care provider has not given me enough information about the care so that I didn't know what to expect.(R)			.699		
The health care provider told me that without using a contraceptive method I could get pregnant again.			.665		
I feel enough privacy while being treated.				.810	
I suspect others could listen during counseling and/or procedure had been done.(R)				.705	
I feel comfortable that no one could observe from outside during examination and procedure had been done.				.693	
I did not feel free during examination and procedure since it was interrupted by others.(R)				.631	
The health care provider has given me medicine to help relieve pain during my procedures.					.796
I am not confident of the ability of the provider who treat me.(R)					.766
Health care providers and their staffs were available during my visit.					.750
I doubt that procedure room has adequate medical instruments and equipment needed to provide complete care.(R)		.331			.538
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 6 iterations.					

Table 3: Linear regression results (N=400)

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-.361	.143		-2.528	.012
Art of Care	1.010	.004	.410	230.886	.000
Physical Environment	1.000	.005	.366	211.025	.000
Information	1.021	.006	.269	157.612	.000
Privacy and Confidentiality	.987	.009	.197	115.941	.000
Quality of Care	.997	.007	.244	142.065	.000
a. Dependent Variable: TotalSatisfaction					

Dependent Variable: total average, R^2 =0.999

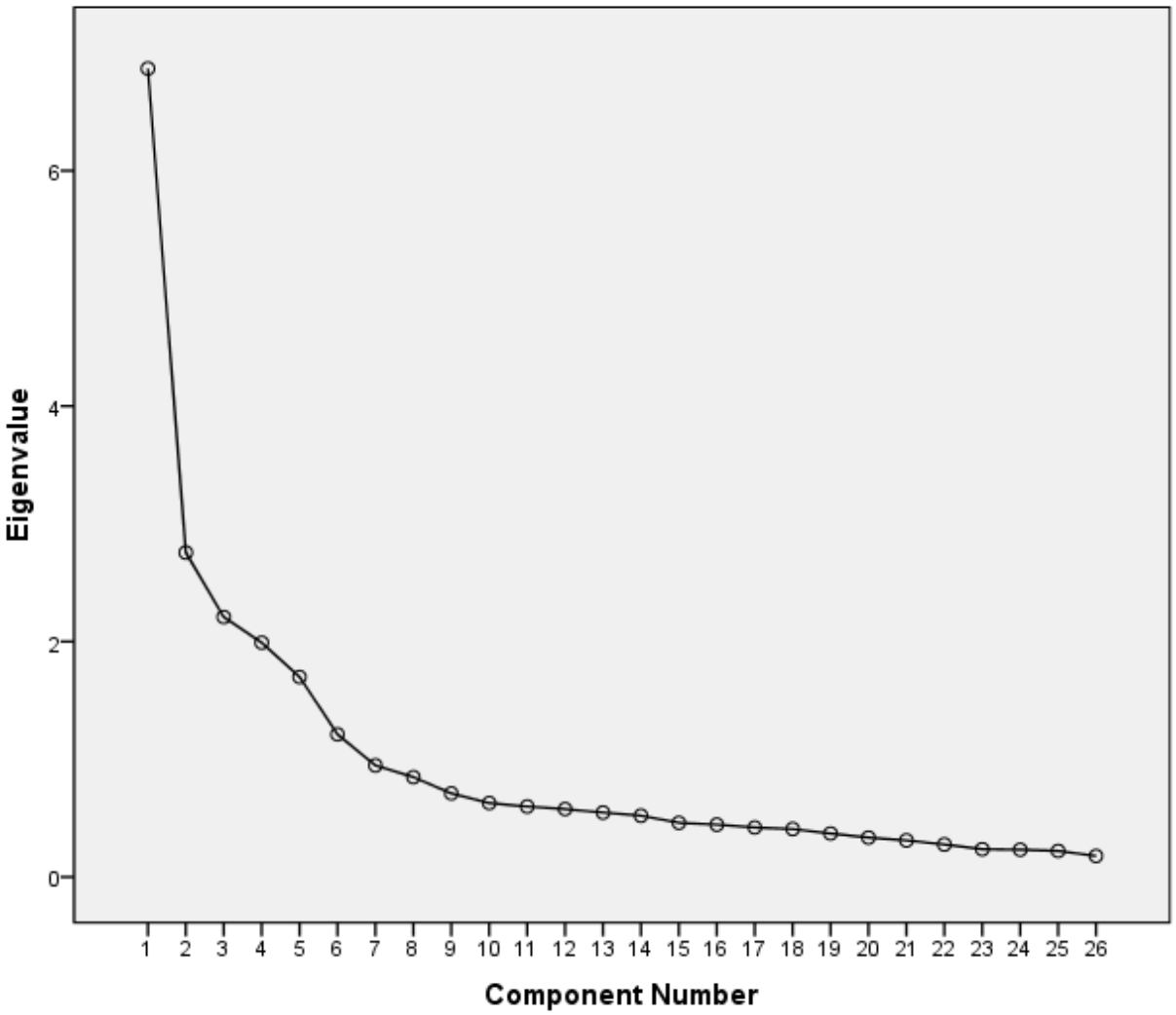

Figure 1. Scree plot graph

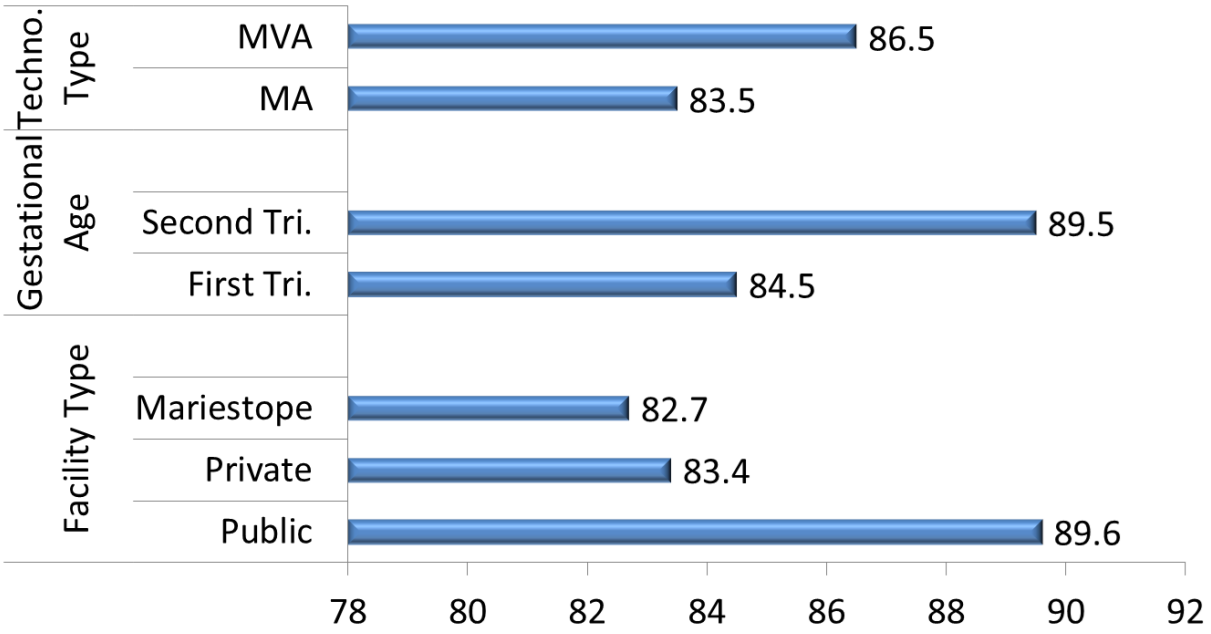

Figure 2. Mean Satisfaction Scores

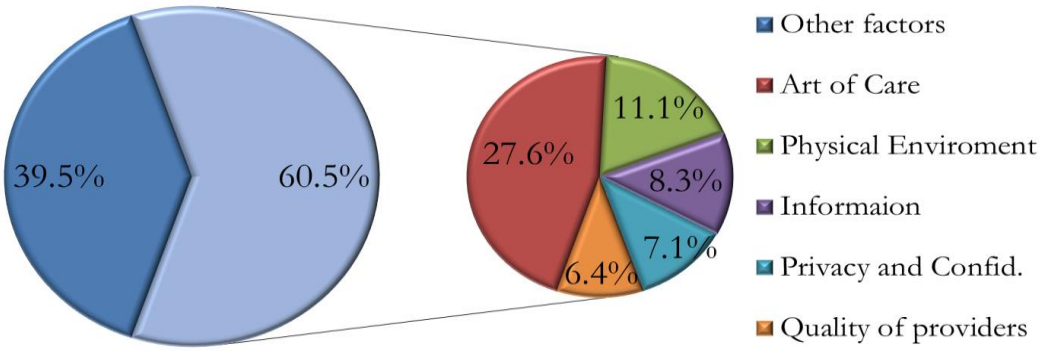

Figure 3. Percentage of variance explained by factors