

WITHDRAWN: Do provider behaviors influence client satisfaction of family planning services in Togo? Evidence from a cross-sectional facility survey

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EDITORIAL NOTE:

The full text of this preprint has been withdrawn by the authors while they make corrections to the work. Therefore, the authors do not wish this work to be cited as a reference. Questions should be directed to the corresponding author.

Abstract

Background

Strengthening quality of family planning care is a key objective in Togo to improve maternal and reproductive health. Structural attributes or inputs to care, and process attributes or content of care, including providers' interaction with clients, are key factors determining quality of care. Client satisfaction with family planning services is linked to contraceptive uptake and continuation, yet the relationship between quality of care elements and client satisfaction of family planning services has not been assessed in Togo, particularly process factors related to client-provider interactions.

Methods

We conduct a secondary analysis using data from a facility-based survey. The survey was conducted in August 2016 in six health districts of Lomé Togo, including a facility audit (N=16), client observations (N=1096) and client exit interviews with women of reproductive age (N=1089). We used multi-variable logistic regression to assess the association between factors related with service structure and process, including provider-client interaction and client perception of provider treatment as a proxy for client satisfaction.

Results

We did not find a relationship between structural attributes of quality and client perception of provider treatment. Among process attributes, we found that several behaviors related to interpersonal skills, including encouraging clients to ask questions and asking clients to describe any concerns they have with their method, and providers use of visual aids were significantly associated with client perception of provider treatment.

Conclusion

The quality of care a woman receives when seeking to adopt or continue family planning methods is essential to improving use of family planning service. Family planning programs must address provider related behaviors that may inhibit the uptake and continuation of contraceptive use, and strengthen interpersonal skills, which may improve client perception of provider treatment with services and facilitate their continued use.

Background

High maternal morbidity and mortality rates continue to burden Francophone West Africa, a sub-region characterized by having the highest fertility rates in the world with a low contraceptive prevalence. In Togo, the total modern contraceptive prevalence rate among all women was 23% in 2018 (1). Unmet need for contraceptives in Togo is high at 34% (2), and among the most common reasons for non-use are socio-cultural norms including the belief that male partners make decisions related to women's

reproductive health needs, low levels of knowledge about where to access services, economic constraints, long travel distances and negative experience with health services resulting in contraceptive discontinuation (3). Proper information on the timing of return to fertility after method discontinuation is needed as many contraceptive users in Togo acknowledge method reversibility to be a chief concern (4). Previous research has shown that clients are better able to achieve their reproductive intentions when family planning services meet their needs and they have satisfying client provider interactions (5, 6).

Improving client satisfaction is linked to contraceptive uptake and continuation (6) and can result in new users when existing clients share positive experiences through word of mouth with their family members and peers (7). Measuring client satisfaction helps in understanding their experiences of health care, identifying problems, and evaluating quality service provision (8). Service quality measured through external observations can objectively identify gaps in technical competency and weaknesses in interpersonal communication as compared to recommended clinical practices. Client satisfaction provides a subjective measure of a client's attitudes and opinions of the care received and can indicate what is perceived to be acceptable care by clients themselves (i.e. waiting an hour or more for services) (7). Measures of client satisfaction are typically constructed from questions pertaining to the client's perception of provider treatment, information provided, opportunities to ask questions and have them answered, perceptions of privacy and whether the waiting time is considered reasonable.

Several factors influence client satisfaction including ease of access, quality of services and medical barriers such as provider-imposed restrictions (9). Access refers to "the degree to which family planning services and supplies may be obtained at a level that is both acceptable to and within the means of a large majority of the population" (9). There is consensus that good quality of care includes the presence of trained personnel in well-equipped clinics where clients are treated courteously and provided with a variety of appropriate services (6). A systematic review found that factors determining quality of care of family planning in Africa reflected those defined by Donabedian (10) and included structure or inputs to care, and process or content of care (11). The quality of stock inventory was the most identified structural factor (11). Client's waiting time, provider competency, provision/prescription of injectable methods, maintaining privacy and confidentiality were the most frequently identified process factors (11). Several qualitative studies have found that clients may also experience poor quality of care including negative client-provider interactions (12, 13).

Health providers play a critical role in the quality of reproductive health services and client's access to them (14). Provider behaviors determine who will be permitted to obtain information or medical attention and under what conditions (15). Previous studies have found that client satisfaction was higher among clients who received higher quality family planning counseling (8, 16) particularly when clients felt they were able to ask questions, state opinions and express concerns (17). Compelling evidence has also shown that provider behaviors, attitudes (18) and biases (19) affect the quality of reproductive health services, which, if improved, could more effectively introduce the concept of family planning and address client concerns to promote voluntary contraceptive use (20). Barriers include provider-imposed eligibility

restrictions that prohibit the use of contraceptive methods based on a woman's age, parity, or consent of their partner (9).

There is limited evidence from Togo on the factors influencing contraceptive uptake and use which can be used to inform family planning programs. Among the few family planning related studies conducted in Togo, the majority examined male engagement and the need to address misconceptions surrounding modern methods and the risks of advanced maternal age and high parity pregnancy through appropriate channels such as facility, community and home based counseling in order to increase contraceptive use (4, 21–23). Evidence from facility-based surveys in Togo found high levels of provider restrictions for family planning related to partner consent, age, and marital status but did not find an effect on whether clients were able to obtain their preferred methods as a result (21). Strategies aimed at improving the quality of post abortion care by increasing providers knowledge, attitudes and skills and reducing unnecessary restrictive biases were found effective in increasing access to contraception (24, 25). In addition, several studies from Togo identified multiple service availability and readiness related barriers (26).

The U.S. Agency for International Development (USAID) funded Breakthrough RESEARCH project aims to catalyze social and behavior change (SBC) through research and evaluation and promotes evidence-based solutions to improve health and development programs around the world. In 2018, Breakthrough RESEARCH spearheaded an interactive consultation with USAID and multilateral partners to develop an SBC research and learning agenda to guide investments, research, and program design. An important area that emerged through these consultations was the need for more evidence to inform provider behavior change strategies including: What interventions improve perceptions of service quality and accountability of providers? and How can we best assess/measure the quality of client-provider interactions from client and provider perspectives? (27). Using secondary data, this paper seeks to address these questions by examining factors related to access and quality of care that influence family planning client satisfaction in Lomé, Togo. This analysis further demonstrates how facility surveys similar to the Demographic and Health Survey Service Provision Assessment can be leveraged and adapted to contribute detailed information that will support the adaptation of SBC program strategies with an emphasis on provider-based counseling approaches.

Methods

Study design and sample

This analysis relies on secondary data from a facility-based survey conducted by the USAID-funded Evidence for Development (E4D) project to identify the factors influencing client satisfaction. The E4D project conducted a facility-based survey to assess the provision and uptake of family planning services in Lomé, Togo from July through August 2016. The study included 16 randomly selected health facilities from the USAID funded AgirFP baseline study, which included intervention facilities (n=11) and control facilities (n=5) from six different health districts in Lomé. The E4D facility-based survey included a

facility audit, client observations and client exit interviews. The field teams observed client–provider interactions during family planning consultations and conducted matched exit interviews for all clients that consented on the days the team was assessing that facility. A total of 1,096 family planning client–provider interactions were observed and 1,089 clients were interviewed in the study. All clients were women of reproductive aged 15-49.

Measures

Client satisfaction

We attempted to construct a measure for *client satisfaction* based on client exit interviews. We used the following questions about service quality: client perception of provider treatment (not well, well, very well), client felt information given was about right (yes, no), client felt comfortable asking questions during consultation (yes, no), client felt others could not hear consultation (yes, no), client felt wait time was none, reasonable or short (yes, no). Polychoric principal component analysis was used to construct a client satisfaction index based on the five available items. We tested the reliability using Cronbach's alpha. The overall Cronbach alpha score (0.17) was less than the desired cutoff of 0.60 (28). Since we were unable to construct a more robust measure of client satisfaction, we used client's perception of provider treatment as a primary outcome given that the question most closely aligned with the client satisfaction construct. Given that few clients responded that the provider did not treat well (n=4), we grouped clients who said they were treated not well and well and compared to clients who stated the provider treated them very well.

Structural and access attributes

We measured the structural attributes of quality based on facility audit observations (Table 2). The structural attributes included the quality of physical infrastructure, examination room equipment availability, whether exams occurred in a separate room or behind a curtain, stock inventory, number of family planning methods usually provided, organization and quality, the number of counseling aids available, counseling protocols available, client records are secure and the type of facility.

Process attributes

We measured the process attributes of quality based on the client-provider observation data. Process attributes included provider interpersonal communication and inquiries about reproductive history, such as : provider asked open and closed questions, provider encouraged client to ask questions, provider treated client with dignity (i.e. greeting the client, introducing herself, speaking with respect and not judging the client, and making sure the client understood information), provider saw client in private, provider discussed a return visit, provider asked about client concerns with methods, provider used visual aids, provider used client records, provider assured client of confidentiality.

Analysis

We explored the data in each of the domains (structural, access, and process attributes). We conducted bivariate and multivariable logistic regression to examine the relationship between the domains and the client perception of provider treatment as a proxy for client satisfaction while controlling for clustering at the facility level.

Results

Client demographics and satisfaction

Table 1 provides an overview of the client demographic characteristics and provides a univariate analysis of the client satisfaction questions that were aggregated into the client satisfaction score using principal components analysis. We found that among the clients attending the facility, over half are between the ages of 25 to 34 and had a secondary or higher level of education. Over 90% of women attending the clinics were married and the mean number of children was 2.5 (SD 1.4). We found relatively high levels of client satisfaction. Responses to client satisfaction related questions were 90% or higher for all measures except waiting time which was approximately 70%. Client perception of provider treatment, our primary outcome, varied between clients who said they were treated very well (11%) and well (89%).

Structural and access attributes

Table 2 describes the structural and access related attributes documented by the facility audit. Among facilities observed, three-quarters were Unité de Soins Périphérique (small health facilities generally located in villages) and nearly two thirds had access to piped water[1]. Nearly two thirds of facilities observed did not have access to sufficient seating[2] in the waiting area and approximately one third provided only a curtain to ensure privacy while two-thirds conducted consultations in a separate room. There was minimal variability in terms of stock inventory, organization, and protection from water and the sun as nearly all facilities had stock in a protected location and organized by expiry date. The facility mean number of equipment pieces was four out of six (standard deviation (SD) 1.2) and the facility mean number of family planning methods usually provided was 6.3 out of 7 (SD 1.6). Only half of facilities observed had guidelines or protocols for family planning counseling available. Approximately 62% of facilities held exams in a separate room rather than simply behind a curtain. Most facilities had posters (75%), job aids (75%), counseling cards (68.8%), and flip charts (56.3%) available. Brochures (12.5%), information sheets (6.3%) and demonstration models (18.8%) were less commonly available. The mean number of visual aids for demonstrating use of family planning methods was only 3.1 out of 7 (SD 1.8).

Process attributes

Table 3 describes client-provider observations among all clients and those who received contraception by specific method. Providers were observed based on their interpersonal skills and questions on reproductive history discussed with the client. Assessment of specific provider counseling skills provides an opportunity to develop a deeper understanding of exactly which provider skills are pertinent in

increasing client satisfaction and where there may be weaknesses that programs may want to address. Overall, we found that greater than 90% of providers were observed to have asked open and closed questions and to have treated clients with dignity. This was consistent among all clients and those receiving a specific method. We found that only about half of providers encouraged clients to ask questions or asked about client concerns with methods. However, this was slightly higher among clients receiving the IUD or implant. Nearly three quarters of client-provider observations took place in private. However, only one in five providers assured the client of confidentiality. There was variation in the use of visual aids among all clients and by method. Approximately 60% of clients receiving an IUD or implant were shown a visual aid by the provider compared to only one-quarter of all clients. Finally, we found that both provider- and client-initiated conversations about pregnancy, and history of pregnancy complications was less than 50% among all clients but was over 50% among IUD and implant clients. Partner's attitude toward family planning was rarely discussed. However, this was slightly higher again among IUD and implant users.

Multivariate regression analysis

Table 4 presents findings from the multi variable regression analysis. We considered structural, access, and process factors and examined their association with client's perception of provider treatment. Specifically, we found that providers who were observed to encourage clients to ask questions, asked about client concerns with methods and used visual aids were significantly associated with client's perception that the treatment was very well received compared to only well or not well received. We did not find an association with structural attributes and a client's perception that the treatment was very well received. We found a statistically significant negative association on client's perception of treatment received related to when a provider assured the client of confidentiality.

Discussion

This study examines the complex factors influencing client satisfaction for family planning services in Lomé, Togo. Our findings organized by Donabedian's framework (10) of structure, process and outcome contribute detailed information to support the adaptation of program strategies with an emphasis on provider-based counseling approaches. We identify several provider counseling behaviors that can be addressed to improve client satisfaction of family planning services and provide suggestions for further research on how to improve existing measures related to client-provider interactions as well as how to better capture attitudes and biases that influence provider performance and adherence to timely and respectful client-centered care practices (27).

Relationship of structural and access attributes on client satisfaction

Despite previous studies indicating that the absence of supplies and equipment may influence providers actual and perceived ability to perform their responsibilities (29), we found that the relationship between structural attributes of quality and access were not significantly associated with a client's perception of

provider treatment. There were limited indicators to measure access and therefore these elements, such as hours of operation and financial related barriers, were not accounted for in this study.

Relationship of process and provider restriction attributes on client satisfaction

Our findings suggest that process attributes were significantly associated with client satisfaction. We found that several interpersonal related behaviors, including encouraging clients to ask questions and asking clients to describe any concerns they have with their method and using visual aids, were significantly associated with client satisfaction. These findings suggest more effort is needed to implement evidence-based practices that improve the process of interacting with clients and the information necessary for informed choice (30).

Limitations and recommendations for future studies

While previous studies acknowledge that objective service quality assessments provide a more accurate reflection of the quality of care provided, our study attempted to focus on the more subjective measure of client satisfaction and ultimately adopted a proxy measure of perceived provider treatment. There are several limitations to client satisfaction measures (31). First, few clients are qualified to judge the technical competence of providers. Second, since client satisfaction measures are based on client exit interviews, it is likely that responses may reflect a courtesy bias where clients overstate their satisfaction or perception of provider treatment with the service provided. In addition, since this study relies on secondary data that did not originally set out to measure client satisfaction, the client satisfaction outcome developed was based on only five questions and reliability tests indicated weakness with the measure, which led us to adopt a single proxy measure for client satisfaction as an outcome. Future studies should consider adopting a more robust measure of satisfaction such as the 12-item indicator described by Wang et al. (2014) (32) and the 10-item indicator described by Jain et al (2019) (33) and should consider including better indicators of client's negative experience (34). It might also be useful to incorporate measures that consider whether or not the client will return or refer a friend or family member to the same provider and to incorporate mixed method study designs so that quantitative findings particularly surrounding client-provider interactions can be further explained (35). In addition to limitations with the outcome measure, we also were unable to effectively assess the technical competency of providers both in terms of the content of counseling messages and clinical administration of contraceptive methods provided. Future studies should include more specific measures of technical competency when assessing client satisfaction. Finally, previous studies have found that providers may exhibit attitudes (15,18) and subsequent behaviors (or biases) that unnecessarily restrict client access and choice based on client demographic characteristics (19,21,36,37). We did not have ideational measures which may be influencing provider behavior such as facility norms, provider attitudes and self-efficacy. Although the original study did measure provider restrictions among a sample of 47 providers within the facilities included in the research study, these measures were not designed to link to the client level data. Lastly, the data are also from an urban setting which may limit their generalizability to health facilities outside of Lomé, Togo.

Conclusion

Receiving high quality of care when seeking to adopt or continue family planning methods is essential to improving use of family planning services (5,6,38). Our study identified several interpersonal skills among providers that suggest programs could improve client satisfaction for family planning services by emphasizing that providers: (1) encourage clients to ask questions, (2) ask clients to describe any concerns they have with the methods, and (3) ensure that providers use visual aids to support interpersonal communication. Previous research has shown that single-faceted solutions such as clinical training and academic detailing have not been effective (39,40). Provider motivation influences worker behavior and can be influenced by incentives including recognition and advancement, among others (41). Communities also play a role in health worker performance through their expectations and norms for how services should be delivered, and formal and informal client feedback on health worker performance (29). For example, community engagement activities (e.g. dialogues between community members and providers and guided visits) present an opportunity to influence providers' perceptions about service quality and behaviors related to improvement of services and should be explored further. Given the increased focus on improving provider behaviors in the Beyond 2020 Ouagadougou Partnership Emerging Strategy (42), governments and donors should also consider investing in a comprehensive SBC approach that recognizes the complex motivations, abilities, expectations, and opportunities that influence provider behaviors (43).

Abbreviations

Evidence for Development (E4D)

U.S. Agency for International Development (USAID)

Social and behavior change (SBC)

Standard deviation (SD)

Standard error (SE)

Declarations

Ethics approval and consent to participate

This manuscript reports findings from a secondary analysis. Ethical approval for the original study was provided by the Togolese Comité de Bioéthique pour la Recherche en Santé of the Togolese Ministry of Health and Social Protection (Avis no. 017/2016/CBRS du 30 Juin 2016). Approval was also provided by the University of California, Berkeley Center for Protection of Human Subjects (CPHS #2016-04-8614). All participants in the study provided verbal informed consent and participants under the age of 18 years were approved to provide informed consent on their own behalf. These conditions were approved by both

ethics committees. This sub-analysis of the previously collected data was exempted from review by the Population Council.

Consent for publication

Not applicable

Availability of data and materials

Data were obtained from the USAID West Africa Regional Office. Requests for data and questionnaires should be made to Sheila Mensah (smensah@usaid.gov)

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

LD conceptualized analysis. KS and LD analyzed data. LD and MS wrote the manuscript. All authors reviewed and provided input into the final version of the manuscript.

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Authors' information (optional)

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Tables

Table 1: Client demographic characteristics and client satisfaction, client exit interviews

	Total % (n=1,089)
<i>Demographic characteristics</i>	
<i>Age</i>	
15-24 years old	20.5
25-34 years old	56.3
35+	22.4
Don't Know	0.6
<i><u>Number of children</u></i>	
Mean (SD) number of children	2.5 (1.4)
<i><u>Educational Level</u></i>	
No education	16.0
Primary	32.3
Secondary	42.8
Higher education	8.9
<i><u>Marital Status</u></i>	
Single	4.0
Married/Living Together	94.2
Widowed/Separated/Divorced	1.8
<i>Client Satisfaction</i>	
<i><u>Client's Perception of Provider Treatment</u></i>	
Not well/poorly	0.4
Well	88.3
Very Well	11.3
<i><u>Client felt information given was about right</u></i>	90.5
<i><u>Client felt comfortable to ask questions during consultation</u></i>	97.6
<i><u>Client felt others could not hear consultation</u></i>	97.7
<i><u>Client felt wait time was none/reasonable or short</u></i>	71.3

Table 2: Structural (content of care) and access characteristics, facility audit

	Total % (n=16)
Type of Facility	
Small health center	75.0
Hospital	25.0
Physical infrastructure	
Type of water at facility	
Piped water	62.5
Borehole/well	37.5
Sufficient seating area for clients (yes)	31.3
Examination room Equipment	
Table for gynecological exam	37.5
Source of light– working lamp	62.5
Speculum	68.8
Latex gloves	93.8
Decontamination solution	100
Sharps box	75.0
Number of examination room equipment pieces available (out of 6)	Mean (SD) 4.4 (1.2)
Privacy in exam room	
Separate room	62.5
Behind a curtain	37.5
Management	
Stock inventory, organization and quality[1]	
Stock organized by expiry date	93.8
Stock protected from water	100
Stock protected from sun	100
Stock not on floor/safe from water	100
Availability of services	

Counseling	
Guidelines/Protocol for counseling at the facility available and observed	50.0
Visual aids for demonstrating use of FP methods at facility	
Posters	75.0
Flip chart	56.3
Brochure/pamphlet	12.5
Information sheet	6.3
Job aids	75.0
Counseling cards	68.8
Demonstration models	18.8
Number of visual aids for demonstrating use of FP methods at facility	Mean (SD) 3.1 (1.8)
Client records kept secure	93.8
FP methods usually provided	
Combined oral pill	93.8
Progesterone only pill	87.5
IUD	87.5
Injectable	100
Implant	93.8
Emergency contraception	81.3
Male condom	87.5
Number of FP methods usually provided (out of 7)	Mean (SD) 6.3 (1.6)

Table 3: Process characteristics by method received, client observations

Client observation	Total[2] % (n=1,094)	Pill % (n=97)	IUD % (n=40)	Injectable % (n=438)	Implant % (n=107)
Interpersonal					
a. Provider asked open and closed questions	92.6	94.9	97.5	90.2	96.3
b. Provider encouraged client to ask questions	51.5	51.6	80.0	44.8	71.0
c. Provider treated client with dignity	96.0	96.9	92.5	96.8	92.5
d. Provider saw client in private	75.5	77.3	85.0	74.9	78.5
e. Provider discussed a return visit	86.4	90.7	97.5	95.4	96.3
f. Provider asked about client concerns with methods	44.0	36.1	62.5	42.0	47.7
g. Provider used visual aids	25.5	16.5	62.5	16.0	57.9
h. Provider used client record	61.6	60.8	67.5	78.5	58.9
i. Provider assured client of confidentiality	19.4	21.7	32.5	17.8	34.6
Technical					
Reproductive history (provider/client asked)					
Number of living children	41.9	33.0	75.0	38.6	83.2
Desire for more children	34.1	28.9	70.0	34.9	77.6
Desired timing of birth of next child	23.5	23.7	57.5	26.0	63.6
Pregnancy status	26.1	27.8	65.0	27.2	62.6
History of pregnancy complications	17.1	17.5	57.5	17.8	54.2
Partner's attitude toward FP	15.3	14.4	25.0	15.3	29.9

Table 4: Factors associated with client perception of provider treatment, multi-variable regression

	Client Treated very well Adjusted Odds Ratio (SE)
Structural Attributes	
<i>Type of Facility</i>	
Small health center	reference
Hospital	1.14 (0.26)
<i>Physical infrastructure</i>	
Type of water at facility	
Piped water	1.35 (0.28)
Borehole/well	Reference
Sufficient seating area for clients (yes)	0.77 (0.24)
<i>Examination room Equipment</i>	
Number of equipment pieces available (out of 6)	0.74 (0.12)
<i>Privacy</i>	
Exam held in separate room	1.11 (0.27)
<i>Availability of services</i>	
Number of FP methods usually provided (out of 7)	0.82 (0.12)
<i>Counseling</i>	
Guidelines/Protocol for counseling at the facility available and observed	0.98 (0.20)
Number of visual aids for demonstrating use of FP methods at facility (out of 7)	1.16 (0.15)
Client records kept secure	1.46 (0.63)
Process Attributes	
<i>Interpersonal</i>	
a. Provider asked open and closed questions	1.78 (0.92)
b. Provider encouraged client to ask questions	1.97 (0.58)*
c. Provider treated client with dignity	0.85 (0.45)
d. Provider saw client in private	1.41 (0.34)
e. Provider discussed a return visit	1.17 (0.36)

f. Provider asked about client concerns with methods	2.06 (0.39)***
g. Provider used visual aids	1.71 (0.36)**
h. Provider used client record	0.75 (0.20)
i. Provider assured client of confidentiality	0.23 (0.13)**
<i>Technical</i>	
RH History Score	1.11 (0.08)
<i>Client Demographic Attributes</i>	
<i>Method received</i>	
No method received	reference
Pill	0.98 (0.58)
IUD	0.79 (0.50)
Injectable	0.89 (0.20)
Implant	1.19 (0.42)
Condom	3.00 (1.82)
<i>Age</i>	
15-24 years old	reference
25-34 years old	1.09 (0.35)
35+	1.11 (0.28)
<i>Number of children</i>	1.01 (0.09)
<i>Educational Level</i>	
No education	reference
Primary	1.28 (0.35)
Secondary	1.68 (0.56)
Higher education	1.74 (0.82)
<i>Marital Status</i>	
Single	Reference
Married/Living Together	2.96 (2.00)
Widowed/Separated/Divorced	1.32 (1.64)

* p < 0.05, ** p < 0.01, *** p < 0.001