Title: Addressing socio-cultural barriers to family planning and co-designing services to improve utilization: evidence from northern Nigeria

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BACKGROUND: Family planning is a proven cost-effective intervention that has contributed to women empowerment and overall human development. Demand factors and women’s expectations and experiences at health facility for family planning services may influence their uptake and utilisation of these services. Increased awareness and positive community perception and quality of family planning services that meet clients’ expectations may greatly improve utilization. The aim of this study was to identify ways to improve family planning service users' experience at primary health care centres towards improving utilization of family planning services in two northern Nigerian states.

METHODS: This qualitative study was part of a larger operations research that explored married women’s and service providers’ perception of quality of care along the RMNCH pathway to inform improvements in service delivery. The study utilised Experience-based co-design (EBCD) methodology that employed qualitative methods to explore clients and service providers’ experiences of healthcare services. A total of 92 IDIs and 4 FGDs were conducted in two communities each in Kano and in Yobe states. ‘Touch points’ from service providers’ and respondents' experiences were extracted using thematic analysis. Joint workshops were further conducted with clients and providers to co-design a user-driven service pathway to improve service utilization.

RESULTS: Key ‘touch points' from providers’ experiences included stock out of family planning commodities, inadequate equipment and infrastructure and cultural and religious believes that prevent utilization of family planning services. In addition, clients reported challenges securing husband permission to utilize services, poor provider attitude and lack of female providers at health facility as obstacles to service utilization. Co-designing a service improvement plan by service providers and clients that involved increasing community awareness about the benefits of family planning by service providers, improving providers’ attitude, increasing family planning outreach and promoting men involvement in family planning programmes.
CONCLUSION: EBCD provides a platform that make clients active contributors to family planning service improvement plans at the health facility thereby ensuring provision of quality services that meet the need of women.

KEY WORDS: Family planning, Experience Based Co-design; northern Nigeria

Background
Understanding patients’ and clients’ perceptions of quality healthcare services and delivering these in a manner that respond to their needs can greatly increase utilization of services [1-3]. Often, quality of healthcare services is defined in a technical manner that does not guarantee patient or client centered services [4]. For Reproductive Maternal Newborn and Child Health (RMNCH) services, utilisation may be influenced by women’s expectations and experiences of the quality of services they receive and by a range of both demand and supply side factors [3]. Apart from personal and community level barriers such as religious and cultural oppositions to seeking care, women’s total dependence on husbands for financial support, objections to accessing care from husbands who are unwilling to pay for the cost, having a poor understanding of the need to access care, barriers may also exist at the level of the health facility if women perceive services as non-responsive and of poor quality, leading to poor utilization [5,6].
Several studies have documented poor utilization of family planning services as a result of poor perception of service quality by clients at health facilities [3,6,7], even with relatively low user expectations [8,9,10]. These studies concluded on the need for health services quality improvements that respond to patients needs to improve utilisation.

Several approaches have been used to promote a client centered quality healthcare services at health facilities. For example, the Experience Based Co-Design (EBCD) has been used in many clinical settings to understand the perception of patients and service providers about healthcare service delivery to improve quality and to ensure both make inputs into improvement plans [11-14]. The EBCD methodology focuses on patients’ own experiences and expectations of care while also considering service providers perceptions of quality of care they render at health facilities. The EBCD approach was employed in this study, using “touch points” from patients and providers experiences to explore how perceptions of quality of care influence women’s decision to access family planning services at health facilities.

The MNCH2 programme, a five-year (2014-2019) technical assistance UKAid funded programme in northern Nigeria, was implemented in 6 states to improve RMNCH outcomes. The programme invested in interventions to improve quality of healthcare services, including
family planning, at health facilities through demand generation activities, which are focused on enabling women access to care in addition to addressing health facility barriers that prevent access and quality services. Interventions focused on mentoring service providers on delivery of quality services, improving client-provider communications, infrastructure and commodity availability and supply. This study was part of the programmes’ interventions at improving quality of RMNCH services at health facilities. It aimed at identifying ways to improve family planning service users’ experiences at primary health care centres towards improving service utilisation in two northern Nigerian states.

**Methods**
The study was conducted in two northern Nigerian states: Kano and Yobe, located in the north-west and north-east region of the country respectively. Both states have very poor RMNCH indices and one of the poorest in the country. The study was part of a larger operations research to explore clients’ and providers’ perception about women’s access to RMNCH services and the quality of services they receive at health facilities with the aim of facilitating co-designing services that responds to women’s needs. Findings were expected to inform the design of MNCH2 interventions to improve quality of family planning and other RMNCH services at the intervention sites.

*Sampling technique*
In each state, two PHCs and their catchment communities within a 2-kilometre radius were selected for the study. These included a rural low volume and an urban high-volume facility. The rural PHC was a ‘low volume’ facility, having a low turnout of patients for family planning services and the urban PHC on the other hand, a ‘high volume’ facility with high turnout of patients identified through the Health Management Information Systems (HMIS) data in both states.

**Clients’ interviews**
Women were purposively sampled with the assistance of community guides. Married women of reproductive age who utilized and did not utilize family planning services at the community’s health facility were included in the study. Twenty-three IDIs were conducted in each of the two communities in Kano and in Yobe, making a total of 92 IDIs. Two FGDs were conducted in each of the two states; making a total of 4 FGDs. Table 1 provides the summary distribution of study sites and interviews. All IDI and FGD sessions were conducted in Hausa, the dominant language spoken in the region. The transcripts were translated into English.

**Table 1: Summary of study sites and interview types**

| State | Community   | Type of Community | IDI Interviews       | FGD Sessions          |
|-------|-------------|-------------------|----------------------|-----------------------|
| Kano  | Gwargwarwa  | Urban             | 23 (1 SP;22 Clients) | 1 Client; 1 SP        |
|       | Kibiya      | Rural             | 23 (2 SP;21 Clients) |                       |
Service Providers’ interviews

Service providers in primary health care facilities, which offer family planning services located closest to selected area, were purposively recruited for the study. In each purposively selected community that was serviced by a Primary Health care facility, eligible participants for the interviews were approached and recruited into the study.

Data Collection and analysis

The data collection teams consisted of experienced qualitative researchers that served as moderators and note takers for the interviews. They were assisted by community gatekeepers to recruit eligible respondents with the desired characteristics. With the consent of the participants, interviews were held in convenient locations that offered high degree of privacy. The consented audio recording ensured that the verbal expression of each participant was captured and collated for analysis. Field notes were also taken with all interviews to capture non-verbal cues. After the IDIs, focus group discussions were conducted to explore key touch points from the previous IDIs. All interviews were conducted with the aid of a thematic interview guide.
The interviews lasted an average of one and half hours. The FGDs comprised about 10 to 12 participants each and at the end of the interviews, a 15 minutes video documentary that highlighted participants key touch points was produced.

The audio recordings of the FGDs and IDIs were transcribed directly from Hausa to English by experienced bilingual transcribers, and the coding of the transcripts was done using the qualitative analysis package, Atlas Ti.

*Co-designing event for improved family planning services*

The EBCD methodology provides a platform that brings about quality improvements in health services delivery and utilises participatory and user experience design tools and processes. The ‘co-design’ process often involves staff, patients and care givers reflecting on their experiences of a service, working together to identify improvement priorities, and implementing changes (Figure 1).
One co-designing workshop was conducted in each state. At the beginning of these events, the 15-minute video documentary was presented to kick-start the co-design process between the women, and the health care providers. Based on the documentary, they (clients and health care providers) reviewed the challenges and strengths of their relationship and suggested ways to improve family planning services in their health facility and community. This was institutionalized in a memorandum of understanding at the various health facilities with an agreement to meet to review these processes periodically, i.e. an evaluation of the impact over an agreed period estimated to fully implement the processes.

Results
Table 2 identifies summaries of the key touch points from clients and providers and improvement priorities that were identified during the co-designing event.

**Access to FP services**

When women were asked about their perceptions of family planning services in their communities, most women especially in urban settings in both states mentioned that the use of family planning methods is well established, although some women are still reluctant to use modern methods because of religious and cultural beliefs.

*Yes, there are women in this community who use methods for delaying pregnancy and there are some who do not. Majority of them use it because they want to rest after delivery before they conceive again. And from what I heard, the methods do not harm women (Age 37, Client, Urban)*

Most respondent further indicated that there had been an increasing trend in use of family planning in their communities, confirming that the initial reservations women had in the past about side effects and other myths such as becoming infertility after contraceptive use are gradually waning.

*In the past, people think that any woman using family planning is against our tradition, but now people are becoming aware of the*
importance of using the methods (family planning). (Age 18, Client, Rural)

The changes include the increase in the number of women who come for it. In the past, they were not many because they were scared of the injection, but now that there are multiple methods, they come. (Age 25, Service Provider, Urban)

Similarly, service providers observed that there had been significant improvements in the use of family planning services in the community, citing evidence of increase commodity request and supply at the health facility. They however maintained that, cultural and religious beliefs still influence adoption and utilisation of family planning services in their communities.

When respondents were asked where most women prefer to seek family planning services from within their communities, the majority mentioned the health facility adding that the reason for this choice was because modern methods were more available at the health facility.

Honestly, they prefer to contact the health facility. (Age 37, not accessing service, urban.)
They mostly use the methods given at the health facility (Age 37, not accessing service, urban.)

However, some women confirmed that traditional contraceptive methods are still often discussed and used in their communities. These
group of women however asserted that in their experiences, use of traditional family planning methods could be unpredictable.

_I use the traditional method but it didn’t work the way I wanted (Age 37, not accessing service, urban.)_

_Local method of child spacing is what they normally use, women discuss it, yes, we women discuss about it and use it. (Age 28, not accessing service, rural.)_

*Cultural and religious beliefs influencing access*

A few respondents mentioned that women that use family planning are seen as ungrateful for what God has given them. They opined that women should not do anything to control or delay getting pregnant and that women that use family planning in the community are looked upon as being ungrateful. This view is shared by women in both rural and urban settlements.

_They (women who use family planning services) are viewed as ungrateful for what Allah has ordained for them. (Age 20, not accessing services, Urban)_

_Some people see women who use methods to delay pregnancy as doing the wrong thing. This is because they say that children are given by God, use of family planning is associated with side effects, the woman who uses family planning may not be able to give birth again and other things. (Age 19, Client, Rural)_

Other reasons given why some women do not access FP services include rivalry among co-wives and the desire to first have the desired
number of children before considering the use of FP methods. Some respondents further mentioned fear of side effects of some of the FP methods.

*It is true that some women in this community don’t use family planning methods because they are not interested in it and some don’t use it because they are afraid of its side effects; women do complain of bleeding after they have used a method.* (Female, Age 22, FP client, Rural)

*They feel it is better they give birth and finish; they think that it is easier for them.* (Age 24, Service Provider, Rural)

*Yes, there are women who choose not to use contraceptives because they want to have more children so that they can compete with their co-wives.* (Age 20, Client, Urban.)

Another respondent mentioned literacy as a barrier to women accessing FP services at the facility, noting that because many of these women are not educated, they may not see the need or appreciate the use of FP in their reproductive lives.

*Some of them are not educated and exposed so they don’t understand what it means while others see it as a waste of time. They prefer going for the traditional type.* (Age 27, FP client, Urban)

A health provider mentioned that lack of information on family planning offered at the health facility as the main obstacle for women
to access services. She further stressed that demand for services would be low if women who require these services are not aware of their availability.

.. some people don’t have adequate information on child spacing. This is one of the problems and strategies for creating awareness should be improved. (Age 42, Health provider, Rural)

**FP decision making and Husband permission to access family planning services**

On who takes the decision about use of family planning, most women mentioned that the decision is largely taken jointly by them and their husbands. They emphasised that husband’s concurrence on use of family planning is important otherwise there may be problem between the couple especially if the husband discovers his wife using a method without his consent. However, women further indicated that sometimes even when women desire to use a method, their husbands may not allow them. In such circumstances, they reported that some women still secretly go ahead without their husband or anyone else knowing.

For some women, their husbands permit them while some, their husbands hardly permit them but they may still go ahead without their husband knowledge or approval. (Age 24, FP client, Rural)

**Cost associated with FP services**
While most respondents agreed that family planning services are mainly free, some mentioned that cost of transportation to the health facility may be a hindrance to access family planning services. This happens mainly in communities that are rural and hard to reach.

They (family planning commodities) are cheap, sometimes you only pay 200 to 500 naira while at other times, they do it for free (Age 25, FP Client, Urban)

Quality of Family Planning Service at health facilities
Respondents expressed their opinions about their perception of the quality of family planning services they received at the health facility. Generally, most respondents affirmed that the quality of family planning services they receive at health facilities has greatly improved and is generally satisfactory. However, some women identified factors relating to poor service quality at health facility.

Staff attitude and punctuality at health facility
Some respondent indicated having challenges with accessing FP facilities because health facility staff are not punctual. A participant further stressed that Service Providers don’t come to work every day and when they do, patients may be delayed for hours before they are able to access services.

... in terms of the attitude of the health care workers, they do not come to work every day. Sometimes you stay from morning till evening
and the health care workers may still not come to work. (Age 19, Client, Rural)

Another respondent mentioned that health facility staff poor interpersonal relationships with clients could significantly influence whether a woman seeks health care services at health facilities or coming back after receiving care the first time. She further explained that if a woman thinks she would be verbally, emotionally or physically abused by a health provider, she may decide not to access care at the HF and stay at home or seek traditional family planning providers. This view was shared by a number of respondents in both rural and urban locations.

I will suggest that the health care workers should be more tolerant in the discharge of their duties.........some people don’t like coming to health centres because of the attitude of the health care workers (Age 20, Not accessing services, Urban)

Availability of preferred family planning methods at health facilities
Availability of preferred family planning method at health facility was identified as an obstacle to accessing services by some women. These women reported that this could be very frustrating especially if a woman kept obtaining permission from her husband and she could still not get a method of her choice after several repeated visits.
The methods are usually available but there was a time I came to get a method but they said it has finished and I should wait till they bring it. (Age 24, accessing FP service, Rural)

They don’t provide implants in this PHC and women also have a misconception about it, thinking that it may get missing in the arm. (Age 26, accessing FP services, Rural)

Stock out of commodities
Most women indicated that family planning methods are generally available at the health facilities. However, some women reported occasional stock out of preferred methods that prevented them from continuing with such methods. Service Providers also confirmed that family planning commodities are usually available at the health facilities but sometimes there could be stock outs of some methods due to logistics of bringing the commodities to the health facility. In such situation, clients are offered whatever method is available.

Long waiting time
While respondent from most rural areas responded that long waiting time for services is never a problem, many women from urban and high-volume facilities complained that long queues owing to the high volume of women coming to the health facility to access care may result in long waiting time. Some respondent also observed that sometimes, some clients are helped to jump the queue especially if they personally know the service provider. Long queues, according to
respondents, are so because of shortages of service providers, making the few on ground to be completely overwhelmed.

*First of all, there are inadequate health care workers and women have to wait for a long period of time before they are attended to.* (Age 35, accessing FP services, Urban, Yobe)

*Because the one we have close to us is a small clinic, you will go and stay for long before they come, they don’t usually start work on time but here in Gwagwarwa they come to work early and they start work on time, sometimes you are the one that will have to even rush to meet them early.* (Age 25, accessing FP services, Urban Kano)

*Shortages female service providers*
A significant concern expressed by those who utilised family planning services at the health facility was unavailability of sufficient female service providers. They affirmed that in a number of health facilities, only male service providers are available to provide family planning services, and this may serve as a barrier to women utilising the services.

Most service provider also confirmed that insufficient manpower is a major hindrance to provision of quality services in many primary healthcare facilities. This is especially important in high volume urban centers where only one staff may be available to offer services and this may result in delays and long queues. Some service providers
confirmed that this could also put a lot of pressure on the service provider such that she does not have sufficient time for each of her clients. They also clarified that while the majority of service providers at health facilities are females, there are a number of health facilities where service providers are males and this may prevent use of the health facility by community members especially reproductive and maternal health service.

*Improvement priorities and outcomes identified by Clients and service providers during co-designing workshop*

The co-designing event provided clients and providers the opportunity to build a mutual understanding that ensured identifying priorities to improve service deliveries at the health facilities (Table 2). During these events, clients and providers further agreed on measures at improvement priorities to address socio-cultural barriers and service quality at the health facility. Providers and clients at the health facility documented these in a memorandum of understanding that was signed by both parties. During these events, both parties noted and agreed that significant socio-cultural barriers still prevent women from accessing family planning services. They further agreed that service providers could work with community members in creating awareness and addressing socio-cultural factors that influence utilization of family planning services at the community level through outreach services.
especially in hard to reach areas. Plans were finalised to work with traditional and religious leaders to promote use of family planning especially for birth spacing for the health of mother and her baby. They further agreed that adequate sensitization and involvement of men in reproductive health needs of women would go a long way in improving uptake and utilization of family planning services and ensuring that husbands permit their wives to utilise services.

On measures to improve quality of services at the health facility, both agreed that skills of service providers should be improved. The respondents mandated the facility health committees in the communities to advocate to government especially at the local government area to organise more refresher trainings for service providers on family planning and other RMNCH services for the health providers, so they can deliver better services. They went on to add that consumables such as soaps and antiseptics should be available at the health facility instead of asking clients to provide these materials before accessing FP services. Furthermore, they mentioned that women should be counselled to ascertain what modern FP method is best for them and not just offering them what is available. They equally mentioned that commodity logistics should be improved to ensure that supplies are always available at the health facility especially implants.
Women also placed emphasis on the need for service providers to be patient with women accessing care at the health facility. Clients requested service providers to treat them with respect and ensure that they provide the necessary information regarding their family planning methods.

**Discussion**

Previous efforts at improving clients’ experience of services at health facilities have relied mainly on findings from experiences of clients through client exit interviews. Furthermore, recommendations are often based on deficiencies identified through this methodology. This study utilized the experience based co-design methodology to bring providers and clients together to foster a common understanding on service delivery and deliberate on identification of priorities for improved performance.

Findings from this study showed that the influence of cultural and religious factors as expressed by both clients and providers still exert a significant influence on utilisation of family planning services in the study area. This conforms with known literature in the study areas and many other parts of Sub-saharan Africa [5-7, 15-18]. Similarly, the influence of husbands as major decision makers on whether to use and not to use family planning services from this study also conform with known findings from other studies other parts of Africa [19,20]. While respondents affirmed that there had been increase in use of family
planning in their communities, it was obvious that significant use of traditional methods still exist. In a similar study, Rabiu et al (2018) found that more than one third of women (37%) in their study in Kano used traditional methods of birth control [21]. Similar studies have documented significant use of traditional family planning methods in other settings in Africa [22,23]. This level of use of traditional contraceptive methods is a cause for concern concerning their ineffectiveness and high failure rates.

In this study, both clients and providers affirmed staff shortages and also male staff as family planning providers in some facilities as potential barriers to access to family planning services. Similarly, most participants identified staff shortages as a major challenge at the health facilities and ascribed this to why there is long waiting time at the health facilities. In many of the facilities, only one provider was available to provide family planning and other services, a situation that often lead to providers being overworked under pressure and prone to exhaustion and stress. Manpower shortages in the right number and skill mix has been documented to be a major obstacle in provision of quality health services including family planning in Nigeria and several other similar settings in sub-saharan Africa [24, 25].

This study also found that women indicated inadequate information about family planning as a barrier to utilization. It is pertinent that
service providers should ensure that patients have access to correct information on the various methods of modern contraception including possible side effect and how to manage them. In this study, this was also emphasised in the service improvement plans co-designed by clients and providers to improve quality.

Findings from this study showed that while women acknowledged that family planning services had improved at health facilities, they nonetheless identified vital aspects of family planning services they perceived to be of low quality. The iterative nature of our methodology ensured that women shared their experiences in a free and conducive atmosphere, in contrast to a number of other similar studies that often utilized client exit interview to assess clients perception and quality of care which many times yield unexpectedly high user satisfaction ratings. In this study, women identified factors such as staff shortages especially female providers, stock out of commodities as contributing to poor service quality and contributed to how they felt these gaps could be addressed. without the usual potential courtesy bias that often occurred in client exit interview. Hameed et al (2017) observed that clients are more likely to share their bad experiences more readily in outreach interviews compared with exit interviews at health facilities [26].
Fostering a common understanding between clients and providers in coming up with strategies to overcome challenges to service provision is quite key in ensuring that relevant and appropriate interventions are designed to sensitize men about reproductive health needs of their wives. The co-design methodology employed in this study is increasingly becoming very useful in ensuring that services are client centered and are co-designed by both providers and clients to ensure that they meet clients’ expectations. Through this approach, clients were able to get more involved in service improvement plans rather than just being passive recipients of a service. The approach further empowers the clients to understand and appreciate the challenges that service providers encountered in the course of providing services and the need for mutual respect and understanding. It also enables the service providers to empathize with users of family planning services and ensuring that services are delivered in a way that meet their expectations.

**Conclusion**

EBCD provides opportunities that put clients as active contributors to designing service improvements plans that respond to their specific needs. It also creates a platform for clients and providers to forge a common understanding about challenges to service provision and ways of resolving them to improve service quality. It is expected that this common understanding will improve provision of quality services.
at the health facilities and contribute to addressing barriers to service utilization at the community level.

This study

**Declarations**

**Ethics approval and consent to participate**

Participation in this study was entirely voluntary, and at the point of recruitment, each participant was informed of the research objectives. Participants were also informed that they could withdraw at will from the research at any stage of data collection. The participants were also encouraged to ask questions whenever possible during the research. Individual consent was solicited from all the participants prior to the commencement of the discussions. Ethical approval was obtained from the Ethics Committees of Kano & Yobe State Ministries of Health.

**Consent for publication**

Not applicable

**Availability of data and material**

Data sharing is not applicable to this article, because sharing qualitative focus group data may cause risk to participants’ confidentiality, and because participants were assured that the data they provide will not be shared

**Competing interests**
The authors declare that they have no competing interests.

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**Authors’ contributions**

OO, JN, SK, AS, and IY conceptualized the study and contributed to the research protocol and the development of study instrument. OO supervised fieldwork. OO, JN, SK, AS, IY contributed to data analysis and drafting of the first version of the manuscript. All authors reviewed and edited the manuscript for intellectual content and agreed on content.

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