

Exploring Knowledge of Implants Among Youths at Area 25 Health Centre in Lilongwe, Malawi

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Abstract

Contraceptive implants are more effective methods of family planning for youths as they enable them to control their reproductive lives better than other family planning methods. Studies have demonstrated lack of awareness on implants among youths. Nevertheless, no known published studies have looked on the knowledge of implants among youths in Malawi. This study aimed at exploring knowledge of implants among youths at Area 25 Health Centre in Lilongwe City, Malawi. Using qualitative study research design, 20 youths participated in qualitative study. The findings revealed that all youths had general knowledge on implants. However, youths had inadequate knowledge on specific instructions of implants. Many youths had heard about implants from health facility workers who give health talks to family planning clients on different contraceptive methods. Future recommendations include data collection from multiple health facilities and targeting health facility catchment area.

Keywords: Contraceptive Implants, Family Planning, Knowledge, Youth.

Introduction

The global youth population is approximately 4 billion, with a significant concentration in developing nations [1]. In developing countries, around 20,000 girls under the age of 18 give birth daily, and many experience pregnancies, resulting in 10,000 youth fatalities each year due to complications from pregnancy and childbirth [1]. There is a lack of awareness among youths about family planning methods like implants, as only 8 percent of the participants reported having knowledge of the implant [2]. In response to this issue, the United Nations Population Fund proposed the implementation of comprehensive education regarding sex and sexuality, alongside family planning services for youths, management of abortion consequences, and treatment for sexually transmitted infections [3].

Approximately 8.8 million young people out of a total population of 17.56 million in Malawi represent a diverse demographic that requires a variety of sexual and reproductive health (SRH) information and services suitable for their life stages [4]. In response to this need, the Malawi government introduced the Youth-Friendly Health Services National Standards and Youth-Friendly Health Services in 2007, aiming to offer high-quality SRH services tailored for the youth [5]. A study conducted by the Coalition of the Prevention of Unsafe Abortion (COPUA) found that 80% of young individuals undergo unsafe abortions [5]. This prompted COPUA and the law commission of Malawi to draft a bill for parliament advocating for the legalization of safe abortions [5]. There is low usage of family planning services by youths, hence making issues related to youth's health a topic of concern in most of the countries in the southern Africa like Ghana, Uganda, Tanzania

and Malawi. Current studies identified several factors as contributing to the higher teenage pregnancy such as lack of use of family planning methods, unsafe sex which is the main contributor to adolescent pregnancy, unsafe abortion and sexually transmitted infections [3]. National Statistics Office conducted a survey in Malawi which revealed that the median age at first marriage is 18.2 years [6]. Among the total of 67,300 abortions performed in Malawi, 37,000 were among individuals aged 15-24, accounting for 55% of the youth who had abortions [4]. A study conducted in Lilongwe, showed that 60% of the youth were HIV positive, while 45% were diagnosed with STIs [3]. The Area 25 Health Centre, located in Lilongwe city, provides youth-friendly services. This centre has the most active youth-friendly health services in Lilongwe City.

Implants are a long-term contraceptive method chosen by 44% of youths in Malawi [7]. Secondary data collected from HMIS at Area 25 Health Centre revealed that 995 youths out of 1,622 (61%) used implants in the five years from 2018 to 2023. There is 23% of unmet family planning contraceptives among youths despite introduction of YFHS and youth corners to increase accessibility to family planning contraceptives including implants [8]. There is scarcity of documented information on youths' awareness of implants in Malawi. The objective of the study was to explore knowledge of contraceptive implants among youths at Area 25 Health Centre in Lilongwe, Malawi.

Materials and Methods

Research Design

This was a cross-sectional study using qualitative method of data collection through in-depth interviews. Qualitative method provided the real experience of youths who accessed implants [9]. Qualitative study helped to explore meaning and interpretation of participant's life experiences [10]. As little was known about the youth's experiences

qualitative study provided a rich detail of their experiences. The study environment remained unchanged as the young individuals were observed in their natural surroundings while they sought to make sense of and interpret their experiences and the meanings behind them. Utilizing a qualitative design allowed the researcher to view the world from the perspective of the youth who used implants and to comprehend their experiences.

Research Setting

The research took place at the Area 25 Health Centre located in Lilongwe City. Lilongwe City is situated within the Lilongwe district, which is part of the central region of Malawi. The population of Lilongwe district is 2,203,911 [4]. Area 25 Health Centre is one of the health centres in Lilongwe City. Area 25 Health Centre was chosen because it has well-functioning YFHS, youth corner and has increased number of youths accessing family planning methods such as implants.

Target Population

The study focused on the targeted and reachable population of young individuals who utilized family planning services at Area 25 Health Centre, specifically those aged 15 to 24 years. This age group was selected as they are in their reproductive years and are sexually active. The researcher gained consent from parents for youths aged 15-17 years while those age 18-24 years were able to give consent without parental approval. The study targeted youths that utilized family planning since they had lived this experience and gave a true reflection of their experience.

Inclusion and Exclusion Criteria

To take part in the research, individuals had to seek family planning methods, with a focus on those aged 15 to 24 years. Participants were drawn from the Area 25 catchment area, as they had prior experience with youth-friendly health services at the Area 25 Health Centre. Youths who could communicate in either English or

Chichewa, which are the languages the investigator speaks fluently, were included. Those seeking other youth-friendly health services, such as STI and HIV/AIDS assistance, as well as individuals under 15 years old, were not included in the study.

Sample Size

A sample of 20 youths were used for the interview and depended on saturation. According to Kumar et al (2020), a sample size of 12-26 people to conduct an in-depth interview is adequate for qualitative research. The researcher successfully gathered the required data from the sample, as they comprised the appropriate demographic identified as youths. The researcher visited the Area 25 Health Centre to obtain information on implant usage by interviewing youths who utilized family planning services.

Data Collection Procedure

In-depth interviews were held with each participant who consented and signed the consent form. Open-ended questions were utilized during the interviews to permit participants to share information and articulate their experiences freely. Each individual interview lasted around 30 to 45 minutes. A tape recorder was employed to capture the interview proceedings. This enabled the researcher to revisit the recording and ensure that no crucial information was overlooked while drafting the report.

The researcher, along with assistance from a nurse at Area 25 Health Centre, selected study participants. Before data collection commenced, the nurse was trained on the data collection tools. Interviews took place at the family planning clinic in Area 25 Health Centre. Data was gathered through comprehensive interviews using a semi-structured interview guide. The researcher conducted the interviews to maintain consistency in the data collected. Two participants were interviewed daily and data

transcription was done on the same day. Review of data was done constantly to identify further probes and gain in depth understanding of the information.

Data Collection Instrument

The researchers conducted semi-structured interviews (first in Chichewa vernacular of Malawi, then translated into English). A semi-structured interview guide and a focus group discussion guide were utilized to gather information on the utilization of implants among young individuals at the Area 25 Health Centre. The initial section of the personal interview guide included inquiries aimed at gathering demographic information. The subsequent section focused on knowledge related to implant usage. Open-ended questions were employed to gather information on the subject being studied. Consequently, these open-ended questions allowed both the interviewee and the interviewer to engage in a more comprehensive discussion of the topics. They also permitted the interviewer to seek further clarification from the interviewee regarding their initial responses. The researcher utilized a tape recorder during the interviews. Furthermore, participants who agreed to partake in the study were provided with thorough explanations regarding the study's objective.

The interviews did not bear names of participants but rather numbers were used to represent the total number of participations. To check validity and reality of data collection tool, the researcher shared with research supervisor to check for quality of the tool. This research's reliability was supported by a pilot study which was conducted at Area 18 Health Centre to identify any ambiguities, poor wording, missing items, and unclear instructions and also inaccuracies and also it was used in order to give an estimate of the time to interview for each individual. Area 18 Health Centre was chosen as the optimal location for the pilot study due to its similarities with Area

25 Health Centre and its provision of youth-friendly health services.

The reliability of data involved on ensuring that the results genuinely reflected experiences and perspectives of the participants. Trustworthiness was established by assessing the credibility, dependability, conformability, and transferability of the data. Credibility was bolstered by engaging deeply with the subject, allowing for attentive listening during the interviews and a better understanding of the experiences being shared. A strong rapport was also developed at the onset of the interaction to ensure participants felt at ease. Additionally, credibility was further strengthened by incorporating the participants' actual words into the final write-up. There existed a risk of misinterpreting the participants' intended meanings due to interviews conducted in Chichewa, which were later translated into English. To mitigate this, the text was supported with direct quotes from the interviews. Dependability was achieved by clearly outlining the selection process for study participants. Conformability was achieved by offering a copy of the interview transcript to the participants to confirm the findings. An audit trail with specific details of the research process, a recording of activities over the length of the research period was maintained. The recording included an audit trail made up of unprocessed data, analysis notes, procedural notes, individual notes, and initial developmental details. The objective was to showcase the evidence and processes leading to the conclusion as clearly as possible. Transferability was secured by selecting participants based on a shared trait, specifically young individuals utilizing family planning. The contextual background for the study also set the scene for the research conducted.

Data Management and Analysis

Data analysis started concurrently with data collection. Thematic analysis was done using the following steps: The researcher tape

recorded the data, listened to it, and transcribed it word for word to guarantee transcription precision. The researcher translated the data into English, while an independent individual translated it back into Chichewa to confirm the accuracy of the data. The data was analysed through manual thematic content analysis, focusing on theme identification via coding. The researcher read the data multiple times, conducting manual coding line by line, organizing and grouping it by similar units. Lastly meanings were grouped into clusters of themes which revealed the common patterns in the data, thus similar responses were grouped together into themes.

Consent

Those involved in the study were thoroughly briefed on the purpose, advantages, and potential risks to ensure their consent. They had the autonomy to choose whether to take part or not. They were informed that they could withdraw from the study at any moment if they chose to, and that declining would not impact the services they received. Participants aged 18 to 24 were required to sign a consent form based on their individual capability, while those between 15 and 17 received consent from their parents or guardians, without any pressure or deceit related to confirming their participation in the study.

Privacy and Confidentiality

The participants' identities were protected, by using codes not names in order to protect their privacy and confidentiality. The information that was provided by the study participants was not available to any other person apart from the researcher and his supervisor in order to maintain confidentiality. Gathered information was kept in an envelope and stored by the researcher himself in a locked drawer. After data analysis, the papers and audio tapes used in the study were destroyed by burning.

Avoiding Harm: The research did not inflict any physical harm on the participants; however, some individuals may have experienced emotional distress when reflecting on the painful experiences they had encountered in their lives. In these instances, counselling was offered for psychological support.

Justice: The individuals involved in the study were chosen due to the research's direct relevance to young people utilizing family planning services. The researcher and the participants established clear agreements regarding their roles in the study, which were formally signed by both parties in acknowledgment of the study's intent.

Results

Demographic Data

In this research, demographic data are any data that provide an understanding of population size, distribution, and composition. Demographic data are important in a study because they assist in understanding the background in relation to the results found [12]. The demographic data included age, marital status, residential areas, number of children, number of partners, highest qualifications, and religious affiliations.

Age: The research aimed to determine the age distribution of the participants. Among 20 youths interviewed, 11 youths were aged 22-24 years, 6 youths were aged 19-21 years and 3 youths were aged 15-18 years.

Marital Status: Participants were questioned about their marital status, revealing that 17 youths were married and 3 youths were not married.

Residential Areas: Respondents were inquired about their living locations, and

findings indicated that 18 resided in urban areas, while 2 were from rural areas.

Number of Children: Participants were requested to specify the number of children they had, revealing that 12 youths had one child, 5 youths had two children and 3 youths had three children.

Highest Qualification: Respondents were asked to mention their highest qualifications and data showed that 12 youths had primary level, and 8 had secondary level education.

Religious Affiliations: Respondents were asked to mention their denominations and results showed that 8 were Roman Catholics, 6 were Pentecostal, 3 were CCAP, 2 were from other churches, and 1 was a Moslem.

Results on Knowledge of Contraceptive Implants by Youths

Qualitative data was gathered through coding and thematic analysis. This approach aimed to extract relevant insights from the participants concerning their views on knowledge of youths on contraceptive implants. Themes were structured according to the research questions. Transcripts were manually coded based on each participant's individual answers to the interview questions. The research participants were prompted to share their opinions on the knowledge of implants, specific instructions, and sources of information for contraceptive implants. Three predetermined themes were used during analysis: level of knowledge regarding implants among youths in general, specific instructions for contraceptive implants and sources of information for implants. Sub themes were extracted deductively. The identified sub themes and formulated meanings are listed in table 1.

Table 1. Themes, Subthemes and Formulated Meanings

Predetermined theme	Subthemes	Formulated meaning
Level of knowledge regarding implants among youths in general	Were able to describe implants	What they know about implants
	Describe instructions	What they know on instructions
	Describe mode of action	What they know on mode of actions
	Describe side effects	What they know on side effects
	Describe source of information for implants	Where they heard about implants

Source: Study Data, 2024

Level of Knowledge Regarding Implants Among Youths in General

This theme presents knowledge of youths regarding implants. The findings revealed that all youths were given information on implants when they were counselled on family planning. This theme highlights general knowledge of implants. The subthemes that emerged from the knowledge of youths on implants were description of implants, description of instructions for implants, description of side effects and description of mode of action for implants.

Description of Implants

The results of this study revealed that youths had knowledge on implants as they were able to describe implants in terms of their duration, that's for three years, others for four years and five years. When youths are knowledgeable on the different types of implants and their durations, they will be able to choose those implants and use them as family planning contraceptives. The results of this research indicated that most participants understood the various types of implants and their longevity. Participant 6 stated *"I heard about implants, but I do not remember their names but I know that there those for five years, others for four years and some for three years and what I have chosen is jadelle which were inserted today and it will take five years"*. Additionally, Participant 5 explained *"I heard about implants that they are three types, those for three years, others for fours and some for five*

years. I am able to remember this information since my implant has been inserted today and it will take three years."

Description of Instructions

The findings revealed that participants had knowledge on instructions which are given to clients who have implants inserted on their arms. They were able to describe instructions for implants such as avoiding using excessive work for the hand where implants have been inserted, should come to health facility when insertion part gets infected and the bandage should be removed after four days. Participant 13 narrated *"uuuu I heard that since jadelle has been inserted, I should avoid doing excessive work like pounding for four days since the rod can come out on the wound due to pressure, I was also told to remove the bandage after four days and check if the insertion area is infected then I should come to the hospital"*.

Mode of Action for Implants

The findings revealed that participants had inadequate knowledge on mode of action for implants. Only a few participants were able to mention one way implants work. Participant 17 narrated *"I have learned that when implants are placed in the upper arm, they inhibit the release of eggs from the ovaries... thus preventing conception... I cannot recall the other mechanisms by which implants function"*.

Side Effects

The findings revealed that participants had adequate knowledge on side effects for

implants. They were able to mention side effects such as irregular bleeding and spotting especially in the first three months after implants insertion and weight changes which may weight increase or decrease, as evidenced by participant 11, who narrated *“I heard that implants have side effects such as irregular bleeding, backache and dizziness..... When I experience prolonged heavy bleeding for more than two weeks I should go to the hospital”*.

Sources of Information on Implants

This subtheme assessed source of information for implants. The results revealed that youths heard about implants from health facility workers who give health talks to family planning clients on different contraceptive methods. Other sources information includes television, radio, school and peers. Participant 7 mentioned *“uuuuu I heard about implants when I came to health facility for family planning method as I attended a health talk where nurses taught us on different family planning methods including implants... .. I also heard about implants from my friends when we met at school club”*.

However, there were some participants who came late to family clinic and could not be given adequate information on family planning methods, so mostly they got information on only the method chosen. Participant 3 narrated *“I heard about implants when I came to health facility when I had one child but today, I only got information on injectable method since that was the method I chose to use as a family planning method... I also heard about implants from private hospitals where I also go for health care services, health workers come to our villages and give talks on implants... I also learnt about implants at a secondary school where I learnt and teachers taught us about implants”*.

Discussion

The findings have offered valuable insights into the knowledge of youths seeking family

planning services including implants. Health Belief Model (HBM) was used as the conceptual framework to guide the discussion on level of knowledge youths have regarding implants. Respondents were asked to share general knowledge on implants. The study found that all respondents had general knowledge regarding contraceptive implants. Youths were able to describe implants and the number of years for different types of implants. This high level of awareness suggests that most participants had received prior counselling on family planning options, including implants. The implication is that those who had opted for family planning methods were likely exposed to health education sessions that enhanced their understanding of the benefits of contraception such as avoiding unintended pregnancies (perceived severity) and recognizing the risk of conceiving shortly after childbirth (perceived susceptibility). These findings align with [13], who conducted a similar study at Ejere Health Centre in Ethiopia and found that 98.5% of respondents had heard of modern contraceptives, with 87.9% aware of implants. Similarly, [14] reported that 94.6% of women were aware of contraceptive implants. In contrast, a study by [15] found that only 40% of participants had heard of implants. However, our study has highlighted specific knowledge on implants instructions.

Although general awareness was high, majority of respondents demonstrated knowledge of implant-specific instructions. This could be attributed to the counselling sessions that included information about insertion sites and duration of effectiveness for methods such as Implanon, Jadelle, and Levoplant. These results are consistent with [16], who found that 88.2% of women in Ghana knew that implants could be removed before the end of their labelled duration. Similarly, [17] in Uganda reported that youths who had used implants had 1.46 times higher knowledge of insertion sites than those who had not. However, [18] found that 48.3% knew how

long implants remain effective. Nonetheless, these studies fall short of knowledge of implant description as revealed by our study.

Majority of respondents in this study could describe implants due to counselling from family planning providers aimed at helping clients make informed choices. This finding is supported by [19], who found that 50% of participants could describe implants accurately. Another study by [20] also reported that 91.7% of clients in Uganda had sufficient knowledge of implants. Likewise, [18] found that 70% of respondents knew the location of implant insertion. Interestingly, our study has also highlighted knowledge on the side effects of implants which the mentioned studies did not focus on.

In terms of side effects, majority of respondents had relevant knowledge. This is because of health education that distinguishes between normal side effects (which require reassurance) and those that require medical attention. Misconceptions still exist among youths, who sometimes associate side effects with myths such as infertility or unwanted physical changes. This finding is consistent with [14], who reported that 82.7% of participants noted changes in menstruation as a common side effect. Another study by [21] found that 65.6% of respondents reported menstrual changes, while [22] highlighted concerns about infertility and hormonal imbalances. Much as these studies have ascertained the side effects, they have not shaded more information regarding the mode of action of the implants.

Minority of respondents knew how implants work to prevent pregnancy. Youths reported that they were not able to remember how implants work to prevent pregnancy, showing inadequate information, they had on implants suggesting that adherence is a challenge due to not understanding how implants work. Although counselling may have covered mechanisms such as suppression of ovulation, thickening of cervical mucus, and thinning of

the endometrium this information may have seemed too technical for most participants to retain. A study by [21] emphasized the importance of understanding contraceptive effectiveness when choosing a method. Similarly, [18] found that 21% of participants understood the implant's duration of action. Furthermore, a study by [23] reported that only three participants could explain the biological mechanism of implants. In contrast, [13] found that 66.3% of participants knew how implants prevent pregnancy. This knowledge on the mechanism of action may necessitate the uptake of implants among the youth.

Most youths in this study indicated that they had heard about implants from healthcare providers. These providers often give health talks and one-on-one counselling to clients, ensuring they receive accurate information on contraceptive methods. This highlights the critical role of healthcare professionals in offering cues to action, empowering youths to make informed decisions about their reproductive health. The World Health Organization emphasizes the importance of family planning counselling in helping women plan pregnancies, protect their health, and space births safely [24].

A similar study by [25] found that 72.3% of participants received family planning information from medical facilities. However, other studies report lower percentages: [26] found that 43.3% of participants in Somalia heard from health workers, [27] reported 30.5%, and [28] found 45% of female adolescents citing health workers as their main information source.

Mass media, including radio and television, also played a significant role in raising awareness about implants. In line with this, [27] reported that 52% of participants in Somalia had heard about family planning from mass media. Similar findings were reported by [28] and [26] (51.3%).

Only a small proportion of respondents in this study reported hearing about implants from

peers. This may explain why some youths possessed only general knowledge about implants, lacking more detailed understanding. The findings are supported by [27], who reported that just 3% of participants cited peers as a source of information. However, [29] found that 36.6% of female adolescents mentioned peers, and [30] reported that 26.6% of respondents identified friends and relatives as their primary sources

Based on the findings discussed in this study about inadequate knowledge on mechanisms of action of implants, a recommendation is made on family planning service providers to offer comprehensive and client-centred counselling on implants mechanisms of action to boost acceptability and uptake. The current research was done at one health facility and may not represent the views of other health facilities. Therefore, there is need to conduct another research at many health facilities. Since the study was done at one health facility, another similar research may be done targeting health facility catchment area.

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Conclusion

The study findings indicate that youths possess some level of knowledge about contraceptive implants. However, youths had inadequate knowledge on specific instructions. Efforts to improve knowledge on specific instructions for implants may directly enhance uptake of implants among youths.

Ethical Considerations

Ethical approval for the protocol was obtained from the Research and Ethics Committee at Kamuzu University of Health Sciences via the Research and Publication Committee of Texila American University. Consent to carry out the study was acquired from the Lilongwe Director of Social Services.

Conflict of Interest

The authors declare no conflict of interest.

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