

FACTORS INFLUENCING THE UTILISATION OF THE INTRA-UTERINE CONTRACEPTIVE DEVICE AMONG WOMEN IN ADDIS ABABA, ETHIOPIA

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ABSTRACT

The intra-uterine contraceptive device is one of the safest and most cost effective contraceptive available in the world. It is more effective than female sterilisation, injectables, and implants in pregnancy prevention. Despite this, only 14% of married women use this device worldwide. In Africa, however, only 1% of women use the intra-uterine contraceptive device, a rate considered the lowest in the world. This area of practice is much neglected in Africa, as evidenced in the limited publication on the same. Hence, this study examined the factors that might influence the utilisation of intra-uterine contraceptive device among family planning clients in Addis Ababa. The study employed a descriptive cross-



sectional design. Data were collected from 366 family planning clients using structured questionnaires administered by trained interviewers. Data were analysed using the Statistical Package for Social Sciences research version 19. Family planning clients indicated a preference for contraceptive methods. They preferred oral pills, injectables and implants to the intra-uterine contraceptive device. A range of socio-demographic factors did influenced family planning clients' choice of contraceptive methods. Examples of these include level of education, and number of children. It was also noted that family planning clients had limited knowledge of the benefits and side effects of this device. Therefore family planning clients need to be empowered with information regarding the availability, and benefits of intra-uterine contraceptive device in order to increase the utilisation of this method.

Keywords: family planning, intra-uterine contraceptive device, long acting contraceptive methods, reversible contraceptives, short acting contraceptives

INTRODUCTION AND BACKGROUND

The intra-uterine contraceptive device (IUCD) is used worldwide by 14% of married women (Speidel, Harper & Shields, 2008:197). The rate at which this device is used varies from country to country. Married and cohabiting women of reproductive age in developed countries have higher rates of IUCD usage, approximately two times higher than those in developing countries (Crosignani, 2008:198). Taking for example the Democratic Republic of Korea, a developed country, a utilisation rate of 78% of IUCD was reported in Crosignani's (2008:198) study. IUCD utilisation rates of 63% and 59% were observed in the same study in Egypt and Cuba respectively. In relation to the sub-Saharan Africa region, Crosignani (2008:198) reported an IUCD utilisation rate of less than 2% among women of a reproductive age. Similar patterns of IUCD usage were revealed in Speidel et al's (2008:197) study. They reported an IUCD utilisation rate of 7% in Latin America, 6% in Asia (excluding China) and 1% in Africa. The low rate of IUCD usage in Africa was a function of a number of factors. Lack of knowledge of IUCD and pelvic inflammatory diseases were noted as major barriers to the use of this contraceptive among women in the southern African region (Gutin, Mlobeli, Moss, Buga & Morroni, 2011:145; Jacobstien, 2007:363).

Taking a closer look at the Ethiopian context, the 2011 Ethiopian Demographic Health Survey revealed that only 29% of married women surveyed used modern family planning methods, such as injectables, implants, IUCD and pills (Central Statistical Agency of Ethiopia and International Coach Federation, 2012:96,98). It was noted that long acting reversible contraceptives, especially IUCD, were preferred by women with plans or intentions to space and limit their bearing of children (Espeut, Renju & Wubshet, 2010:9). It was further highlighted that most of the women lack information about the effectiveness of long acting contraceptive methods. For example, only 15% of all Ethiopian women were aware of IUCD.

Taking these reports into account, it was not surprising to note the low usage of long acting contraceptives, such as IUCD among Ethiopian women. Nationally, only 2% of modern family planning clients use IUCD in Ethiopia (Central Statistical Agency [Ethiopia] and International Coach Federation, 2012:9). Despite this low uptake, there are currently no published studies in Ethiopia that have explored factors influencing the utilisation of IUCD.

RESEARCH PROBLEM

Ethiopia has a National Reproductive Health Policy that encourages the use of long acting family planning contraceptive methods. Despite this policy, many women who visit health facilities for family planning in Ethiopia usually choose short acting methods (Espeut et al, 2010:9). It was reported by Espeut et al (2010:11) that 77% of family planning clients in Addis Ababa were aware during their study of long acting family planning methods, including IUCD. However, only 2.6% of these clients use IUCD (Central Statistical Agency [Ethiopia] and ICF International: 2012:9). Reasons for this low usage are poorly understood. Hence, healthcare workers tend to experience some difficulties in their efforts to improve IUCD usage in Ethiopia, including its capital city, Addis Ababa. Thus, this study investigated factors influencing the utilisation of IUCD with the view to offer suggestions to improve its uptake.

PURPOSE OF THE STUDY

The purpose of this study was to examine the socio-demographic factors that might influence the utilisation of IUCD among family planning users in Addis Ababa.

DEFINITIONS OF KEY CONCEPTS

Family planning users: these relate to women who use modern types of contraceptives (Sonfield, 2007:15).

Intra-uterine device: a small plastic or metal object placed in a woman's uterus for contraceptive purposes (World Health Organisation (WHO), (2012:39).

Long acting contraceptive methods: these relate to contraceptive methods that are used for a relatively long period of time: three to five years for implants, and up to 12 years for IUCD (Jacobstein, 2007:363).

Modern family planning: these include both artificial contraceptive methods (oral contraceptive pill, injectables, implants, IUCD and surgical contraception), and natural methods (such as breast-feeding and calendar approaches) (WHO, 2012:130).

Reversible contraceptives: these are contraceptives (e.g. IUCD) that may enable the mother to be fertile if she stops using the same (WHO, 2012:43).

Short acting contraceptives: these are contraceptives (e.g. pills), which are used for a relatively short period of time (a month for oral pills and three months for injectables) (WHO, 2012:41).

RESEARCH METHODOLOGY

Research design, population and sampling

This study utilised a quantitative descriptive cross-sectional design. It used descriptive statistics, such as percentages to describe factors that might influence women in Addis Ababa to use IUCD. The population of this study was made up of women of childbearing age (20–49 years old), who visited the health facilities for family planning in Addis Ababa. Fifteen health centres were randomly selected (simple random approach) from 35 family planning units that provided public health facilities in Addis Ababa. The 15 health centres sites accounted for 42% of all family planning units that provided public health facilities in the study area. Women with similar socio-demographic factors that influence the utilisation of the IUCD visited these health centres. A systematic random sampling approach was used to select study respondents from family planning clients who came to the health facilities for family planning services. A total sample size of 366 respondents was selected from the health centres, and this was calculated based on a 95% confidence level, and an alpha of 0.05.

Data collection

Data were collected from January to March of 2013 using a structured questionnaire designed and piloted by the researchers. As most of the respondents were partially literate, trained interviewers read the questions to the respondents and recorded their responses on the questionnaires. In addition to documenting the verbal responses, they were also audio-recorded to increase the reliability of information obtained (Joubert & Ehrlich, 2007:88).

Validity and reliability

To ensure reliability, this study utilised a large sample size and adopted a random sampling procedure to select respondents. The questionnaire used was tested on a population similar to the study population, and its reliability was evaluated using Cronbach's alpha. The estimate obtained was 0.6. To ensure internal validity of this study, field workers were trained on data collection, including the content of the questionnaire. To further ensure internal validity, the data collection process was closely monitored by one of the researchers. The study sample was randomly selected and was representative of the study population.

Ethical considerations

Ethical clearance was obtained from the University of South Africa's Higher Degrees Committee. Permission to undertake the study was obtained from the Addis Ababa City Administration Health Bureau, sub-cities and government officials associated with the study sites. Respondents consented to participate in the study following discussions of the study's aim, benefits and relevant ethical issues, such as privacy, confidentiality, prevention of harm, voluntary participation, and right to terminate participation.

DATA ANALYSIS

Data were analysed using the Statistical Package for Social Sciences research (SPSS) version 19. Descriptive summary statistics in the form of frequency tables and graphical summaries of data were used to present the study results.

RESULTS

The socio-demographic factors that might influence IUCD uptake are shown in table 1. These factors include gender, age, marital status, level of education, family size, number of children, religion, and occupation. A total of 366 family planning clients (women) participated in this study: Two hundred and seventy eight (76%) respondents were between 20 and 30 years of age, 80 (21.6%) were between 30 and 40 years, and the rest 8 (2.2%) were 41 years of age and above. Most of the study respondents 273 (74.6%) were married.

Table 1: Demographic factors influencing IUCD uptake.

Factors	N(number)	Percentage (%)
Age groups		
20-30	278	76
31-40	80	21.9
41 & above	8	2.2
Marital status		
Unmarried	71	19.4
Married	273	74.6
Divorced/widowed	22	6
Number of children		
No children	88	24
1-3 children	245	66.9
4+ children	33	9

Factors	N(number)	Percentage (%)
Level of education		
Elementary	116	31.7
High school	119	32.5
Diploma or Degree	99	27
Illiterate	32	8.7
Main occupation		
Gov't employee	85	23.2
Housewife	115	31.4
Daily labourer	50	13.7
Maid or sex worker	12	3.3
Merchant	49	13.4
Student	55	15

It is shown in table 1 that IUCD uptake was slightly higher among women aged 31 years and younger than those aged 31 years and older. Approximately 67% respondents had one to three children, and 24% had no children. The rest of the respondents (9.1%) had four or more children. The result indicates that women with two or more children used IUCD more than women with fewer or no children. This suggests that the number of children was an important determining factor for the use of IUCD by women.

In relation to the level of education, 119 (32.5%) respondents completed high school, 116 (31.7%) completed only primary school, 99 (27%) had either a college diploma or degree, and 32 (8.7%) were illiterate. A direct positive relationship was noted between level of education and IUCD uptake. Family planning clients with tertiary level education were observed to use IUCD more than those with lower levels of education.

Child desire and fertility plan versus IUCD uptake

Table 2 shows the results in relation to fertility and child desire for IUCD uptake. When respondents were asked whether they would like to have more children, 226 (61.7%) responded with a yes, while 140 (38.3%) responded with a no. With regard to respondents who wanted more children, they were asked to state the number of years they would like to wait for before their next pregnancy. While 106 (29%) wanted to have their next pregnancy or child within the next two or three years, 120 (32.8%) preferred to wait for more than four years. In relation to limiting pregnancy, 100 (27.3%) respondents reported that they would like to limit their pregnancies, but 226 (72.7%) were against limiting pregnancy, meaning they preferred not to limit their child bearing. With regard to child desire and fertility plan, women who wanted

to wait for two years and above before having the next child were found to use the IUCD more than women who were keen to have children.

Table 2: Child desire and fertility for IUCD uptake

Factors	N(number)	Percentage (%)
Want more children	226	61.7
No more children	140	38.3
How many years:		
2-3 years	106	29
4 years & above	120	32.8
Want to limit child bearing	100	27.3
No limit of child bearing	266	72.7

Family planning demand, choice and future plan

Figure 1 shows family planning methods used by clients. All the study respondents who came to the health facility for contraceptive refill were family planning clients. When these respondents were asked about the family planning method they were using at the time of the interview; 53 (14.5%) reported using oral pills, 213 (58.2%) injectables, 68 (18.5%) implants, and 28 (7.7%) IUCD. Only one client reported to be using condoms.

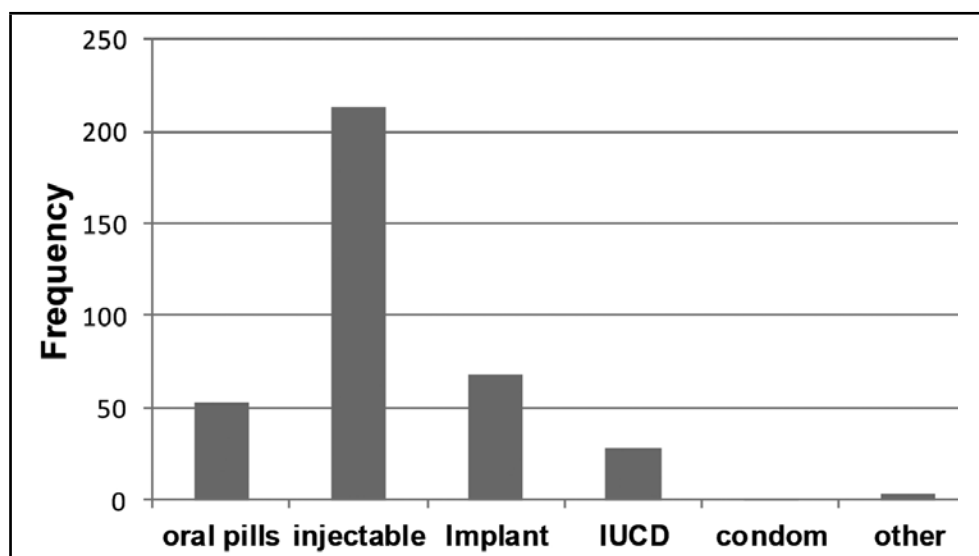


Figure 1: Family planning methods used by clients

Study respondents were questioned on whether they had any intention of changing the family planning method they were using. While 129 (35.2%) of them had plans to change the method they were using, 237 (64.8%) preferred to continue using the method they were familiar with. Of those who intended to change their family planning method, 5 (1.4%) planned to switch to oral pills, 25 (6.8%) wanted to change to injectables, 47 (12.8%) wanted to change to implants, and 45 (12.3%) planned to use IUCD. When respondents were asked about the use of IUCD, 314 (85.8%) reported that they had heard about this type of contraceptive, and 52 (14.2%) replied that they had never heard of IUCD. Of those who responded to have heard of IUCD, 224 (49.1%) claimed that they first heard of this device from health centres or hospitals, 154 (33.8%) from mass media (television or radio), 72 (15.8%) from family or friends, and 6 (1.3%) from private clinics or hospitals.

As part of knowledge of assessment, respondents were asked to mention the benefits of IUCD: 155 (29.1%) reported that it is safe to use, 96 (18%) mentioned that it is long acting, 120 (22.5%) said that it is effective in preventing pregnancy, 68 (12.8%) claimed that it is hormone free, and the rest, 94 (17.6%) failed to mention any benefits related to this device. Respondents were also asked to list potential side effects of IUCD: 59 (16.6%) responded that it causes pain and cramps, 55 (15.4%) mentioned bleeding, and 5 (1.4%) claimed that it could sometimes lead to changes in the menstrual cycle. However, a very good proportion of respondents 165 (46.3%) replied, 'I don't know'. In relation to possible complications that might arise when using IUCD, only a small number of respondents reported perforation and ectopic pregnancy, 12 (3.8%) reported pelvic inflammatory disease or infection, 43 (13.5%) stated expulsion, and 262 (82.1%) replied, 'I don't know'.

Respondents were also asked about their opinion on the knowledge of community members in relation to IUCD. The questions mainly focused on side effects, benefits and effectiveness. In relation to the side effects, twenty-five (7.7%) of the respondents replied pain or cramping, 18 (5.5%) bleeding, 2 (6%) menstrual changes, and 132 (40.5%) 'I don't know'. In relation to the benefits, 68 (20.3%) of the respondents said that IUCD is long acting, 20 (6%) responded that it is effective, 21 (6.3%) said that it is safe, 26 (7.8%) responded that it is reversible, and a large number of them, 200 (59.7%) replied that they did not know the benefits of IUCD.

Attitudes toward IUCD

One hundred and ninety one (51%) of respondents agreed that long acting methods are safer and more effective relative to short acting contraceptives. However, 69 (18.9%) of respondents were against this view, and the rest, 55 (15%) adopted a neutral stance, in other words, they failed to comment. With regard to safety and cost effectiveness, 176 (56.1%) of respondents claimed that IUCD are safer and cost effective family planning approaches. But 58 (18.5%) of respondents disagreed with

this view, and 80 (25.5%) failed to comment. When respondents were asked whether they would recommend IUCD to their family, relatives and friends, 137 (43.6%) participants responded with a yes, 70 (22.3%) responded with a no, and 107 (29.2%) were not sure whether they would recommend it.

DISCUSSION OF RESEARCH RESULTS

This study, which adopted a descriptive quantitative design, investigated factors influencing the utilisation of IUCD among family planning clients in Addis Ababa, Ethiopia. IUCD is considered one of the safest, and most cost effective contraceptive currently available. Despite this, only 14% of family planning clients use this device globally, and such usage varies between countries and regions. For example, IUCD is only used by 1% of family planning clients in countries within the sub-Saharan region of Africa. This low utilisation rate is a function of a number of factors. Misconceptions among family planning users and relatives about IUCD, for example, 'it travels through the body', contribute to the low utilisation rate. Such a misconception is attributable to lack of knowledge on the part of family planning clients, and lack of knowledge and skills on the part of healthcare providers to offer effective counselling in relation to the benefits of this device. Family planning clients also frequently note shortage of IUCD, particularly in developing countries, to contribute to the low utilisation of this device.

The outcome of this study revealed that older family planning clients (aged 31 years and above) are more likely than their younger counterparts (aged 30 years and below) to use IUCD. This was because the older family planning clients had children, and might therefore use IUCD correctly and consistently to prevent pregnancy, a view consistent with that of Deans and Grimes (2008:418–423). Most of the family planning clients of this study were married, and given that they had two or more children, they were expected to use effective contraceptives, like IUCD to prevent pregnancy. Apparently, this was not the case, as the family planning clients had plans to have more children, and thus failed to use IUCD. However, the minority of the family planning clients with four or more children reported to use IUCD consistently and correctly, an outcome inconsistent with that revealed by Espey, Finer and Hubacher (2011:291). While the number of children contributed to the differential use of IUCD among the family planning clients of this study, the pattern of IUCD use revealed among women with four or more children in Espey et al.'s (2011:291) study could be attributed to sterilization. Given that cultural beliefs discourage the practice of sterilization among Ethiopian women in Ethiopia, only a minority of women was expected to engage in this practice. This is evident in this study, as family planning clients with four or more children opted to use IUCD instead of sterilization to prevent pregnancy.

The use of IUCD in this study was also related to the educational status of family planning clients. This means family planning clients with tertiary levels of education (diploma or degree) reported to use IUCD more than those with lesser educational achievement. While a similar association between educational achievement and IUCD use was also noted in Lamvu, Steiner, Condon and Hartmann's (2006:399–403) study on contraceptives, it seemed to indicate that family planning clients with elementary and secondary levels of education tend to use frequently other methods of contraception, such as implants and injectables. This could not only be attributable to the advantage that these contraceptives could stay effective for several weeks, but also because they are less invasive relative to IUCD. It could also be a function of the view that these contraceptives could prevent the taking of daily doses of pills, and thus would enable the women to conceal their pregnancy prevention attempts from relatives and partners. Despite the use of contraceptives, some family planning clients (106) experienced unwanted pregnancies. The unwanted pregnancies reported were attributable mainly to the incorrect use of contraceptives, such as missing doses, and what familiar planning clients referred to as 'contraceptive failure'. In Speidel et al's (2008:199) study, unwanted pregnancies were attributed to failure on the part of women to use effective contraceptives, like IUCD. The use of IUCD was also limited among family planning clients of this study. The question now arises, apart from educational status, shortage and number of children, what else could influence women's use of IUCD?

The provision of information, particularly on the benefits of IUCD was reported by family planning clients to promote the utilisation of this device. They claimed that they were mainly informed about the benefits of IUCD by family members, staff of health centres, and discussions on television. Similar findings have been reported elsewhere. Espeut et al (2010:9), for example, reiterated that health centres, hospitals, family, friends, and mass media do play a significant and important role in relaying information about IUCD to family planning clients. Even though this might be the case, over 80% of respondents reported that the communities in which they live were in the main not aware of IUCD. This is consistent with the findings of Araujo et al (2008:475), which revealed that the limited community knowledge of IUCD was a function of inadequate public information about the device. Arguably, limited knowledge of a device of this nature could result in low usage, a view congruent with the outcome of this study. In relation to counselling services, approximately 50% family planning clients agreed that they were counselled about IUCD at health facilities, and 78% reported that they were counselled about oral contraceptive pills and injectables. Family planning clients were counselled more for other family planning methods than IUCD. This counselling pattern provides an explanation for the low uptake of IUCD among family planning clients of this study. Acknowledge this, the information women received from service providers about contraceptive

methods enabled them to identify and use methods of their choice (Dehlendorf, Levy, Ruskin & Steinauer, 2010:292).

Exposure to counselling and information will help to shape attitudes toward specific contraceptive types. Attitude is referred to by Rosenberg and Hovland (1960:20) as predispositions to respond to some class of stimulus with certain classes of response. The stimulus here is contraceptive type, and a woman's attitude comprises the extent to which a contraceptive is valued and the extent to which the individual believes that using it will lead to the desired outcome. About half of the family planning clients had positive attitudes toward IUCD, as they reported it as a safe and cost effective contraceptive method that they would recommend to relatives and friends (Amy, Gilliam, Melissa, Martins & Weston, 2012:403). These women expressed willingness to use IUCD, and such willingness was a function of the support they had from families, friends and partners. Thus, women are more likely to value a contraceptive method if they are persuaded of its effectiveness by significant others.

CONCLUSION

The use of IUCD by family planning clients was influenced by a number of factors. Examples of these include the level of education, number of children, shortage of IUCD, age of family planning clients, support from significant others, sterilization, cultural beliefs, knowledge and attitudes toward the device. Misconceptions, such as 'IUCD travels through the body' were also reported by family planning clients to influence the uptake of this device. However, the misconceptions were in the main associated with limited knowledge of IUCD on the part of family planning clients, which in part was a function of limited information and support in the form of counselling offered to these women by healthcare workers. Given that IUCD is known in the literature, and reported here as a cost effective contraceptive, it is critical to promote its use among women with the desire to prevent pregnancy. This can be achieved through education using varied approaches, such as counselling, mass media (television), provision of information at health centres, and active community involvement.

LIMITATIONS

This is a descriptive quantitative study that examined socio-demographic factors that might influence the utilisation of IUCD among family planning users of public health facilities in Addis Ababa. Taking into account its descriptive nature, its results cannot be generalised to all health facilities in Ethiopia that offer IUCD services. However, they provided insight into factors that could influence the use of IUCD.

The study sample was made up of only family planning clients (women). This means the sample did not include the partners (spouses) of the family planning clients.

RECOMMENDATIONS

Given that male partners do play a role in making decisions about the use of contraceptives, involving them in the study would further enhance insight into this area of practice. So, it is important for future research to include family planning clients and their respective partners to examine the socio-demographic factors that might influence the utilisation of IUCD. Such research could adopt a mixed methods approach to explore both lived experiences of women and their partners in relation to this device, and factors that might influence its use.

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