

Misconceptions, and Beliefs Regarding the use of Intra-Uterine Device among Family Planning Clients in Southwestern Ethiopia: A Mixed-Method Study

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Abstract

Introduction: Intrauterine devices (IUDs) are highly effective long-acting and reversible contraceptive methods that are widely available around the world. However, its utilization is very low, especially in Southwestern Ethiopia.

Objective: To identify misconceptions, and beliefs regarding the use of IUD among family planning clients in southwestern Ethiopia.

Methods and Results: A mixed-method study was conducted among 844 family planning and health care providers, community and religious leaders. Only 3.3% were free from misconceptions or beliefs towards IUD use. The most commonly cited misconceptions and beliefs are those saying that IUD causes infertility (5.2%), interference with sexual intercourse (4.3%), infection (3.9%), spontaneous expulsion (3.1%) from the uterus, and restriction of daily routine (2.4%). Moreover, the main reasons for not using IUD in the future were fear of side effects, husband disapproval, and lack of knowledge.

Conclusion: Misconceptions and beliefs about IUD use very high. A community-based awareness creation activities have to be done in Southwestern Ethiopia. A longitudinal study was recommended to examine the real causes of these misconceptions and beliefs about IUD in southwestern Ethiopia.

Keywords: Misconceptions; Beliefs; IUD; Family Planning; Ethiopia

Abbreviations

IUD: Intrauterine Device

Introduction

Worldwide IUD is the second most popular contraceptive method (14.3%) amongst women of reproductive age [1,2]. However, in sub-Saharan Africa (SSA) the contraceptive method mix is skewed toward short-acting methods (which constitute 82% of modern contraceptive use in the region) [3]; the rate of unintended pregnancy was 91 pregnancies per 1000 women aged 15 - 49 years [4-6].

The use of IUD contraceptive methods varies widely. For instance, 18.6% in Eastern and South-Eastern Asia [5], 18.1% in Northern Africa, 27.8% in Tunisia, and 36.1% in Egypt [7]. According to a retrospective study in Nigeria in 2015, copper IUD was the second most accepted method of family planning (32%) among women of reproductive age [8].

In Ethiopia the use of modern contraceptive methods nearly tripled; increasing from 14% to 41% between 2005 and 2019 among married women aged 15 - 49 years with contribution of IUDs to the method mix is negligible and its utilization varies by region [9,10]. Despite the use of long-acting reversible contraceptive methods in Ethiopia, many women usually choose short-acting methods. For instance, only 2% of married women in Ethiopia utilize IUD ranging from 5.2% in Addis Ababa, 0.4% in Gambella and 0% in Somali [10]. In addition, the rates were: 3.8% in Jimma town in 2012, 5.7% in Gonder town in 2015 and 13%, in Tigray regions of Ethiopia [11-13].

The Ethiopia Federal Ministry of Health (FMoH) has considered the important role of long-acting and permanent contraceptives and aims to increase the availability of these methods to 20% of all family planning users. However, recent data show that injectable contraceptives are popular (23%), followed by contraceptive implants (8%), while IUD utilization is only 2% [14].

In Ethiopia, there is a high unmet need for family planning (22%) among currently married women, and maternal mortality ratio (412 per 100,000 live births), with an estimated 32% of all maternal deaths related to unsafe abortions [15]. Moreover, approximately 30% of pregnancies are unintended in Ethiopia [16]. This will require concrete activities to increase the country's contraceptive prevalence rate and also shift the method mix to a greater emphasis on long-acting, safe and highly effective methods [14,15].

Previous studies in Ethiopia have shown several different factors associated with the utilization of IUCDs such as having knowledge about the method, level of education, perceived misconceptions, husbands/partners being supportive and age of women [17-21]. Therefore, this study aimed to explore the misconceptions and beliefs about IUD use in Southwestern Ethiopia. This study provides essential data for health managers, health care providers, and non-governmental organizations to design appropriate interventions to improve IUD utilization.

Materials and Methods

Study setting and period

A study was conducted in the Gambela, Ilubabor Zone, and Bench Maji Zone, Southwest Ethiopia. Gambela region is divided into three administrative zones (Anuak, Nuer and Majang), 12 districts and one special woreda (Itang). The region has 6 hospitals [1 General and 5 primaries], and 28 health centers and 14 health posts [SARA report of 2016] with an estimated total population of 307,096, consisting of 159,787 males and 147,309 females. Ilubabr Zone has 14 districts and one city administration, with 2 hospitals and 40 health centers, a total population of 968,303 according to the Zonal health report 2012 EFY. Benji Sheko has 6 districts and 2 city administrations with a total population of 639,629. It has 26 Health centers and 1 hospital. Overall, the study area had a total population of 1,608,239 and 86 health facilities. The study was conducted in health facilities providing family planning services for selected districts in the region from November 1 to 30, 2020.

Study design

A cross-sectional mixed method study involving health facilities and communities using quantitative and qualitative data collection was conducted.

Source population

The source population for the study was all community and religious leaders, and all women who came to the health facilities for family planning services, interval post-partum, and part-abortion services during the study period.

Study population

Purposively selected health care providers, communities, and religious leaders, and systematically selected women who came to selected health facilities for family planning services, interval post-partum and part-abortion period during the study period.

Sample size calculation

The sample size was determined using Epi info™ Version 7.1.1, with the following assumptions: confidence level = 95%, margin of error = 5%, design effect 2 and proportion of family users having misconceptions and beliefs about IUD = 50%. Finally, after adding a 10% non-response rate an overall sample size of 844 was used.

For the qualitative study, 8 FGD per giving a total of 24 FGDs and 8 key informant interviews (KII) from each region giving 30 KII were conducted.

Sampling techniques for quantitative data

The Illubabor Zone was selected purposively from Southwestern Oromia, and Benchi Sheko Zone from Southern, nations, nationalities and people's region of Ethiopia, and the Gambala region. All hospitals from all three regions were selected, and 30% of the health centers from each region were taken. Then family planning services, interval post-partum, and post-abortion service clients were selected systematically after calculating the K-value based on the last 3 months case flows of each health facility.

Sampling techniques for qualitative data

Key informants' interviews (KII), focus group discussions (FGD), and facility audits were conducted. A KII was conducted among purposively selected health care providers, religious leaders (both Muslim, wakefata, Christians, and community leaders), whereas FGD will be conducted among women and male development army, in urban and rural settings of each region. Two FGDs per stratum, two from the male development army and two from the female development army in urban and rural areas. Eight FGDs per region totalling 24 FGDs will be conducted.

Data collection procedure

Training was given to the data collectors on the purpose of the study, the contents of the questionnaire and issues related to the confidentiality of the responses and the rights of respondents. The questionnaire was pretested in Jimma town public health facilities in 5% of the sample. Supervision of the data collection procedures was performed daily. The data collection tool had information about socio-demographic characteristics of respondents, reproductive history, misconceptions and beliefs about IUD were prepared in English and translated into local languages (Afaan Oromo and Amharic). Client exit interviews were conducted with eligible study participants via face-to-face interviews using semi-structured data collection tools. The interview was administered by trained data collectors who were fluent in local languages and one of the translations of the questionnaire. Further interview guides were prepared and used to explore misconceptions and beliefs about IUD from selected community leaders, husbands and clients.

Data management and analysis

After exporting the quantitative data from the ODK server, STATA version 16.0 was used for data analysis. Descriptive statistics such as frequency, proportion, mean, and standard deviation were used to describe variables based on their nature. For qualitative data transcription, audio recorded information was performed. Then coding of the transcript and thematic analysis assisted by ATLAS ti version 7.1 software was used.

Operational definitions

Neutral

women who have the information, but neither support nor oppose the misconceptions or beliefs stated.

Not sure

women who have no adequate information to support or oppose the misconceptions or beliefs stated.

Results and Discussion

Sociodemographic characteristics

Among the total expected sample of 844 women of reproductive age group, 784 participated in the study with a response rate of 93%. On average, the study participants were 28 ±6 years with the largest numbers of reproductive women belonging to the age range between 25 and 29 years 31.8% and the least` groups were those found between 15 and 19 years 6.5%. The majority of respondents, 93.6% were married. Regarding the religious distribution of the respondents, more than half 57.1% were protestant followed by Orthodox accounting for 23.9% (Table 1).

Variables		Frequency (784)	Percentage
Age Mean = 28 ± 6 years	15-19	51	6.51
	20-24	208	26.53
	25-29	249	31.76
	30-34	174	22.19
	35- 49	102	13.01
Ethnicity	Oromo	351	44.77
	Amhara	112	14.29
	Agnuak	92	11.73
	Bench	84	10.71
	Nuer	33	4.21
	Kaffa	30	3.83
	Kanbata	29	3.70
	Others	53	6.76
Marital status	Married	734	93.62
	Single	25	3.19
	Separated	16	2.04
	Widowed	9	1.15
Religion	Protestant	447	57.02
	Orthodox	187	23.85
	Muslim	146	18.62
	Others	4	0.51
Educational status	Unable to read and write	148	18.88
	Able to read and write	36	4.59
	Primary School (1-8 Grade)	231	29.46
	Secondary School (9-12 Grade)	200	25.51
	Diploma	138	17.60
	Degree and above	31	3.95
Respondent occupational status	Housewife	542	69.13
	Government employee	141	17.98
	Merchant	62	7.91
	Student	34	4.34
	Daily labor	5	0.64

Table 1: Sociodemographic characteristics of study participants in Southwest Ethiopia.

Obstetrics characteristics of study participants

The mean and standard deviation of age at first sexual intercourse, first birth and first marriage 17.5 (± 2.4) with 9 - 30 years old, 20.4 (± 3.4) with 14-35 years, and 18.9 (± 3.1) with the lowest 10 years to a maximum of 35 years. Of the 91% of women who had ever been pregnant, 43.5% were pregnant three or more times, 15.7% had experienced unintended pregnancy and 9.2% had an abortion. Of the women with unintended in the last five years, 13.7% had unintended but pregnancies were miss-timed, and 2.1% had unwanted pregnancy. Among women who had given birth, 35.9% had three or more births and 13.6% ended up in child/infant death (Table 2).

Variables		Frequency	Percentage
Ever been pregnant	Yes	712	90.8
	No	72	9.2
Number of pregnancies (N= 712)	One	230	32.4
	Two	172	24.1
	Three and more	310	43.5
Ever encountered unintended pregnancy	Yes	112	15.7
	No	600	84.3
Ever encountered abortion	Yes	68	9.2
	No	647	87.3
Ever given birth	Yes	643	90.0
	No	69	10.0
Ever encountered child/infant death	Yes	87	13.6
	No	556	86.4
Total number of children ever born to you (N=698)	one	237	36.8
	Two	175	27.2
	Three and more	231	35.9
Fertility status in the last five years	Not pregnant in the last five years	109	15.3
	Pregnant, Not wanted at All	15	2.1
	Pregnant, wanted later	97	13.7
	Pregnant, wanted then	488	68.9

Table 2: Obstetrics characteristics of study participants in Southwest Ethiopia.

Information about IUD

Information about modern contraceptives was nearly universal among the study participants. However, regarding exposure to IUD information, 47.96% of women had no information about IUD. The source of information was health facilities for 24.19%, and 14.82% heard about IUD from more than one source including health facilities, media and friends/peers.

The qualitative findings also supported the lack of information related to IUD among communities,

A 28 years old male, who was from Onga kebele stated that

“... Overall, there is no awareness about this (IUD) method. If you teach the community about this method using a picture it is good. As to me, I only know family planning such as DEPO, pills, I didn't have any information about IUD.”

Also, another 42 years old male, a member of the health developmental army from the Onga Kebele, Ilubabor zone, indicated that *“... It is not available in our health center. I didn't hear about IUD and didn't see those using this method.”*

Similarly, finding from Bench sheko zone highlighted the same issue

“It is my first time to hear about this (IUD) contraception method.

Male health developmental army, Aman, Bench sheko zone, age 50 years

“... although information about IUD is not yet properly disseminated in our community, i heard about IUD from healthcare workers for the first time. Most mothers were not well aware of using IUD (Para 4, age 25 years female, Aman kebele, Bench Zone).

Respondents were also asked whether they have been given information about IUD during their visit to the health facility, and 423 (53.95%) said that they have been told about IUD (Table 3).

Variables	Frequency	Percentage
Heard of modern contraception methods		
Yes	757	96.56
No	27	3.44
Expose to IUD information		
Yes	408	52.04
No	376	47.96
Source of information about the about IUD (N=408)		
Health Facility	142	29.34
Health Facility Media Friends	87	17.98
Health Facility Media	49	10.12
Health Facility Friends	47	9.71
Friends	39	8.06
Media	39	8.06
Others	5	1.03
Told about IUD during a health facility visit		
Yes	423	53.95
No	361	46.05
Distance from nearest health center/hospital (mean= 30 min±31)	5-30 minutes	78.06
	30-60 minutes	16.33
	> 60 minutes	5.61

Table 3: Information about IUD in Southwest Ethiopia.

Misconceptions, and beliefs about IUD use among family planning clients

The majority (70.4%) of contraceptive users were not sure of misconceptions and beliefs about IUD use, whereas 23.5% were neutral. Only 3.3% of the participants disagreed with the stated misconceptions and beliefs that is they had no misconceptions and beliefs about IUD use, while 2.8% of the contraceptive users agreed with misconceptions and beliefs. As table 4 shows 5.2 percent of participants had misconceptions and beliefs that “IUD cause infertility”, followed by “it interference with sexual intercourse” (4.3%), “causes infection” (3.9%), spontaneous expel from the uterus (3.1%), and restricted daily/routine activities (2.4%) (Table 4).

Misconceptions and beliefs about IUD use	Agree Freq. (%)	Neutral Freq. (%)	Disagree Freq. (%)	Not sure Freq. (%)
IUD interference with sexual intercourse	34 (4.3)	172 (21.9)	36 (4.6)	542 (69.1)
IUD causes infertility	41 (5.2)	169 (21.6)	22 (2.8)	552 (70.4)
IUD causes infection	31 (3.9)	180 (22.9)	31 (3.9)	542 (69.1)
IUD causes cancer	14 (1.8)	191 (24.4)	30 (3.8)	549 (70.0)
IUD may result in Ectopic pregnancy	6 (.8)	163 (20.8)	24 (3.1)	591 (75.4)
IUD spontaneously expel from the uterus	24 (3.1)	192 (24.5)	28 (3.6)	540 (68.9)
IUD will migrate to another organ	8 (1.0)	193 (24.6)	20 (2.6)	563 (71.8)
Using IUD restrict daily/routine activities	19 (2.4)	216 (27.6)	16 (2.0)	533 (67.9)
Total	2.8%	23.5%	3.3%	70.4%

Table 4: Misconceptions and beliefs about IUD use in Southwest Ethiopia.

Health workers also hear from the community about the misconceptions raised. One key informant from Mizan-Aman said that “..... some clients feel that IUD can disseminate to other places, other fear about ectopic pregnancy, others fear infertility, and it may be removed accidentally, Cancer, and infection ...” (25 years, female, midwifery).

One key informant from Gambela stated that “...women in this community do not have a clear understanding of the IUD method, some women in the community consider it a bad device because it is a small device that can be inserted into the womb and can affect the wombs which may cause infertility in the future” (27 years old, Male, Nurse).

Women’s preference for IUD method and reason for their preference

Among the ever users of modern contraceptives only 1.8% of participants were selected for IUD (Figure 1).

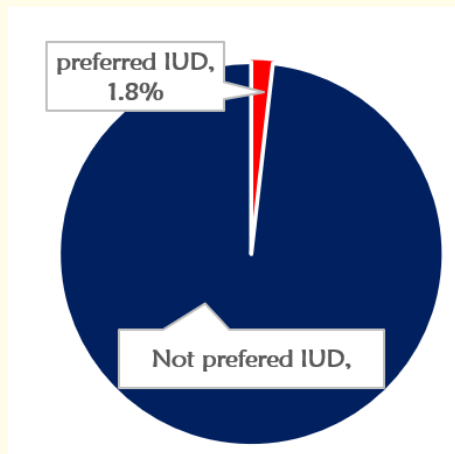


Figure 1: IUD method preference among current users of modern contraceptives in Southwest Ethiopia.

The maximum duration of IUD use among ever users of IUD was 48 months, followed by 24, 16, 12, 10, 6 and 1 month each by one client while the rest three client removed in the first 3 months after insertion.

The most cited reasons were personal preference (57.8%), followed by method of preference with their husband jointly (22.2%) and medical issues (6.3%) (Figure 2).

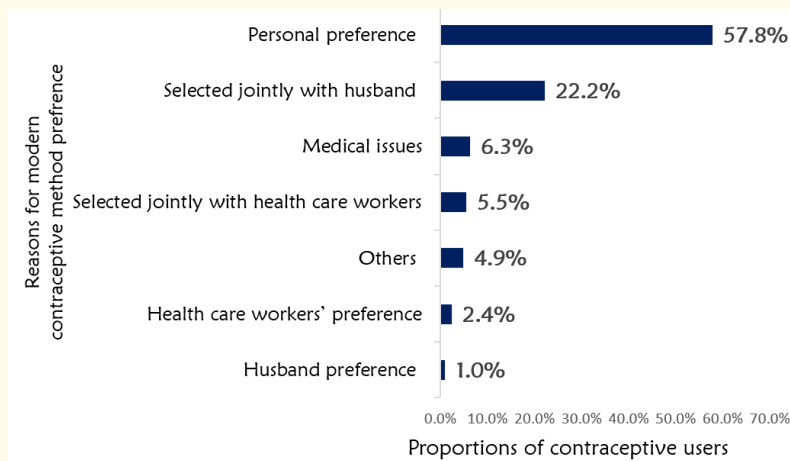


Figure 2: Reasons for modern contraceptive method preference among current users of modern contraceptives in Southwest Ethiopia.

Main reasons for not using IUD ever and in the future

The most commonly cited reasons for not using IUD so far were lack of knowledge (56.6%), followed by fear of (27.1%), not informed by health care providers (6.3%) and unavailability of the method (5.7%) (Figure 3).

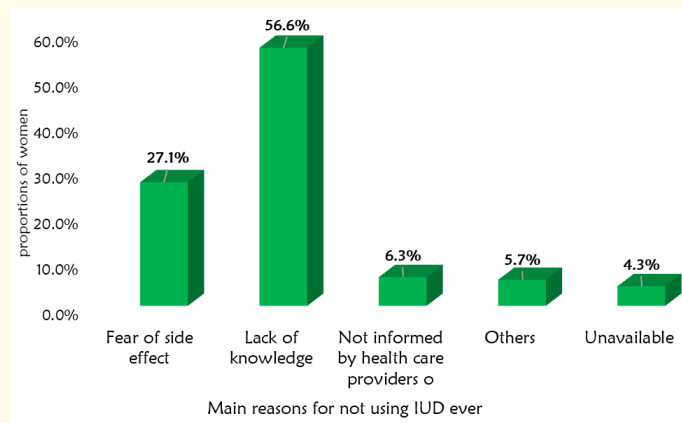


Figure 3: Main reasons for not using IUD among contraceptive users in Southwest Ethiopia.

One of the key informants from Muslim Religion in Gambela states that “Personally I do not have any information or knowledge about the IUD contraceptive service method and it is not commonly used by many women in my community. I do not have an interest in using IUD to avoid pregnancy because my religion does not allow us to use any kind of contraceptive service method” (26 years, married, 10+3 education).

Furthermore, the majority (52.2%) of contraceptive users cited as main reason for not using IUD in the future was fear of side effects. Other main reasons listed were husband approval by 14.2% of the participants, whereas 13.9% of the contraceptive users reported a lack of knowledge (Figure 4).

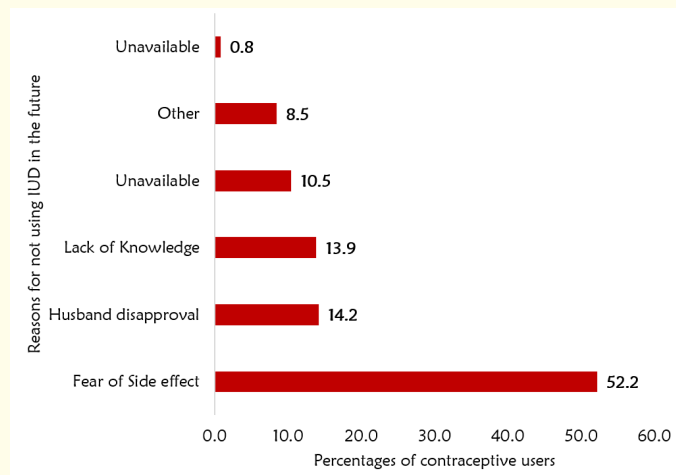


Figure 4: Main reasons for not using IUD in future among contraceptive users in Southwest Ethiopia.

According to FGD participants in Gambela, there is lack of knowledge, and negative opinions of husbands and the community leaders. One of the FGD participants said that “Many in this community have a negative perception about the use of IUD because of the fact they do not good information and knowledge about an IUD method and they are against the use of this device (45 years, male, Farmer).

Although an IUD is an effective method of contraception and has no hormonal side for which it is suitable for all women of reproductive health, its utilization is very low in Southwestern Ethiopia. Thus, this study aimed to explore why IUD is low by identifying different socio-cultural aspects such as perceptions and beliefs regarding IUD use in Southwestern Ethiopia.

According to the findings of this study, only about 1.3% of the interviewed women were using IUDs at the time of the interview. This finding was slightly lower than that reported from Australia where 17 (2.3%) of women were copper IUD users [22].

In this study, 70.4% of contraceptive user women were not sure of misconceptions and beliefs IUD use, while 2.8% of the contraceptive users with misconceptions and beliefs. Among participants 5.2 percent of participants have agreed to the negative statements of misconceptions and beliefs that “IUD cause infertility”, and “it with sexual intercourse” (4.3%), Similarly a cross-sectional study in Addis Ababa Ethiopia in 2016, found 5.2% of the reproductive age women agree with the negative statement saying IUD causes infertility, and 6.8% perceived as it interferes with sex [23]. And also another case-control study in Addis Ababa also found 8.6% of IUD users and 10.1% non-users of IUD perceive that IUCD causes infertility [24]. This implies the perceptions and beliefs saying IUD causes infertility and can interfere with sex are common in different areas of Ethiopia.

This study also found 3.9 percent of the study participants agreed with the negative statements saying IUD causes infection and 3.1% agreed with spontaneous expulsion from the uterus, in contrary to this the study in Addis Ababa found 40.1 percent of the participants with the IUD causes infection, and 13% agree that it spontaneously expel from the uterus [23]. Another case-control study also found that 11.7% of the cases and 31.4% of the controls perceive that IUD causes infection in the uterus [24]. This might be due to difference in study period for the perceptions and beliefs saying IUD causes infection and it spontaneously are decreasing among family users.

The study was conducted during COVID-19 outbreak, which the type of clients visiting health facilities and may pose limitations. Involving different nations living in three different regions in the southwestern Ethiopia make strength of the study.

Conclusion

More than two-third of contraceptive user women were not sure of the negative statements on misconceptions and beliefs towards IUD use, while only three in hundred women agree with misconceptions and beliefs. The most cited misconceptions and beliefs are those saying IUD infertility, with sexual intercourse, causes infection, spontaneously from the uterus, and daily/routine. Moreover, the main reason not using IUD in the future was fear of side effect, husband disapproval, and lack of knowledge.

Much to be done in backsliding the misconceptions and beliefs about IUD use in the study area. A longitudinal study was recommended to examine the real causes of these misconceptions and beliefs about IUD in southwestern Ethiopia.

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Conflict of Interest

The authors declare that they have no competing interests.

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