

## Intention to use Long-acting and Permanent Family Planning Methods among Married 15-49 years Women in Debre markos Town, Northwest Ethiopia

Amanuel Alemu Abajobir\*

School of Population Health, The University of Queensland, Herston Road, Herston QLD 4006, Australia

### Abstract

**Introduction:** Access to high quality modern contraceptives and women's education are the two central issues in the Ethiopian government development strategy. Demand, access and use of the provider-dependent, long-acting and permanent contraceptive methods, have lagged behind, despite high effectiveness and popularity among users. Thus, this study assessed the intention and factors associated with long-acting and permanent family planning methods among married 15-45 years women in Debre markos town to look at the local context.

**Methods:** A community-based cross-sectional study was conducted to assess the intention and factors associated with long-acting and permanent family planning methods in June 2013. The total sample size was 343 and samples were allotted proportionally for randomly selected three kebeles. Data were collected after ethical clearance had been obtained from research and publication directorate of Debre markos University and analysed descriptively and using logistic regression analyses.

**Results:** Almost one in five 157 (45.9%) married 15-49 years women intended to use long-acting and permanent family planning either to space or limit birth. Lack of method mix was considered as the main reason not to intend the methods.

Age, educational status, discussion on family planning methods with husband, desire for live children, ever and current use of any modern contraceptive methods and shifting from one method to the other were factors associated with intention to use long-acting family planning methods.

**Conclusion:** Generally, long-acting and permanent methods intention was found to be high among married women either to space or limit their pregnancy. Health promotion activities on the benefits of long-acting and permanent family planning must be undertaken to increase women's awareness towards the methods.

**Keywords:** Intention; Long-acting and permanent family planning methods; Married 15-49 Years women; Ethiopia

### Introduction

Long-Acting and Permanent Contraception Methods (LAPCM) are Family Planning (FP) methods providing pregnancy protection for more than one year leaving the user free from any further responsibility and function for a long period of time once applied. They include the Intrauterine Contraceptive Devices (IUCD), implants, female sterilization or Tubal Ligation (TL) and male sterilization or vasectomy [1-3].

Unmet need for LAPCM remains high, for healthy timing and spacing of pregnancies and hence limiting family size; thus, a range of effective methods are needed [4-6]. Demand, access and use of the provider-dependent, LAPCM, has lagged behind, despite high effectiveness and popularity among users [7]. Hence, it is necessary to understand the factors influencing women's contraceptive intention in Ethiopia to ensure accessibility and use of more effective contraceptives [8]. Yet no study has documented the intention of and factors associated with LAPCM in Debre markos town. Thus, this study assessed the intention and factors associated with LAPCM in the town to tailor likely interventions.

### Methods

#### Study area and period

The study was conducted in Debre markos town from 15<sup>th</sup>-20<sup>th</sup> June 2013.

#### Study design

A community-based cross-sectional study was conducted to assess the intention and factors associated with the use of LAPCM. The study employed quantitative methods.

### Study population

The source population was all married 15-49 years women found in Debre markos town. The study population was married 15-49 years women found in three randomly selected kebeles (smallest administrative units) of the town.

### Sample size determination

The sample size was determined using a single population proportion formula with the following assumptions: prevalence of LAPCM by married women 15-49 years to be 12.3% [9]; therefore, ( $p=0.12$ ), level of significance 5% ( $\alpha=0.05$ ),  $Z_{\alpha/2}=1.96$ , 5% ( $d=0.05$ ) margin of error, design effect of 2 and 10% non-response rate. Accordingly, the total sample size was 343 married 15-49 years women.

### Sampling procedure

A multi-stage sampling technique was used to select the sampling units. There were 6 kebeles in the town. The sample size for each of the selected 3 kebeles was determined proportionally to the size of the household (HH). The first HH was selected using simple random

\*Corresponding author: Amanuel Alemu Abajobir, School of Population Health, The University of Queensland, Herston Road, Herston QLD 4006, Australia, Tel: +251921540059; E-mail: [abajobir64@yahoo.co](mailto:abajobir64@yahoo.co)

Received: Jun 25, 2014; Accepted: November 03, 2014; Published: November 05, 2014

Citation: Abajobir AA (2014) Intention to use Long-acting and Permanent Family Planning Methods among Married 15-49 years Women in Debre markos Town, Northwest Ethiopia. Fam Med Med Sci Res 3: 145. doi: 10.4172/2327-4972.1000145

Copyright: © 2014 Abajobir AA. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

sampling method. If eligible HH had two or more than two women of the specified age group, one was selected randomly. Then systematic sampling was employed to select women from subsequent HH. If the selected HH did not have at least one married woman of reproductive age group, it was skipped to the next HH.

### Data collection procedures

Interviewer-administered anonymous questionnaire was developed by adapting pertinent variables and terminologies from different studies on LAPCM [10-13]. The questionnaire was designed to include socio-demographic characteristics, reproductive history, knowledge on and practice of modern contraceptives and factors affecting LAPCM utilization. Six Health Extension Workers (HEW) who had been deployed in each kebele collected the data.

### Data quality management

To ensure data quality, pre-test was undertaken on 10% of the sample before the actual data collection to examine the reliability and construct the validity of the instrument. Intensive training was given for data collectors and supervisors on the objectives of the study, contents of the questionnaire and how to maintain confidentiality and privacy of the study participants. Data were entered into Epi Info software package as part of data quality management. During data cleaning, logical checking techniques were employed to identify errors.

### Data processing and analysis

Epi Info 3.5.1 was used for data entry and cleaning. The cleaned data were exported to SPSS 16.0 for windows for statistical analysis. Data were explored to visualize the general feature before analysis. Univariate analysis was used to assess the uptake of LAPCM. Data were presented using tables accordingly. To determine independent factors associated with LAPCM uptake, a logistic regression model was applied. First, each variable was entered into a binary logistic regression model. Second, variables which were significant at p-value of  $\leq 0.05$  were fitted into multivariate logistic regression model to identify independent factors of LAPCM uptake. Variables which were significant at a p-value of  $\leq 0.05$  in the final multivariate logistic regression model were identified as independent factors of LAPM intention.

### Study variables

#### Independent variables:

Socio-demographic characteristics

Reproductive History

Knowledge of modern contraceptives

#### Dependent variable:

Long-acting and permanent contraception methods intention.

### Definitions

**LAPCMs:** Four contraceptive methods are classified as long-acting or permanent: IUCD, implants, female sterilization and vasectomy; IUCD and implants are long-acting methods; tubal ligation and vasectomy are permanent methods [1-3].

**Intention:** Desire to use long-acting and permanent contraception methods as reported by the study participant.

### Ethical considerations

Ethical clearance was obtained from institutional review board of Health Sciences College of Debreworkos University. Permission was also obtained from each kebele administration. Verbal consent was obtained from the study participants as some of them were expected to be illiterate and their consent was recorded depending on their willingness to take part in the study; accordingly, the procedure of obtaining participants' consent was approved by institutional review board of the college. On behalf of participants below 18 years, informed consent was obtained from the next of kin and/or caretakers and the procedure was also approved by the board. For beneficence, any person found sick in any HH during data collection was advised to visit the nearby health facility.

### Results

#### Socio-demographic and economic characteristics

A total of 342 married women of reproductive age group participated in the study yielding 99.7% response rate.

The mean age of the women was 29.75 ( $\pm 7.387$  SD) years and 287 (83.9%) were Orthodox Christians. The majority, 331 (96.8%), constituted Amhara ethnic group. About four-fifth, 269 (78.7%), attended formal education; about half, 169 (49.3%), husbands were above Grade 12. The mean number of family size was 4.01 ( $\pm 1.50$  SD). The majority, 131 (38.3%), of the study participants were housewives. The mean monthly income was USD 65.05 ( $\pm 64.80$  SD). Most of the participants, 318 (93.0%), possessed means of communication (Table 1).

#### Reproductive history

The mean age at marriage was 20.16 ( $\pm 3.61$  SD) years. More than four-fifth, 278 (81.3), of the women had ever given birth and the mean age at first birth was 22.36 ( $\pm 3.65$ ) years. The majority, 126 (45.3), had 2-3 ever born children. The mean number of alive and more wanted children in life was 2.25 ( $\pm 1.22$  SD) and 3.56 ( $\pm 1.09$  SD) respectively. Most, 310 (90.6), women discussed about FP with their husbands and the number of children was decided both by the mother and father in more than three-quarters (77.5%) of the families (Table 2).

#### Knowledge of long-acting and permanent family planning methods

About three-quarters, 189 (74.7%), of the women reported that implants act for a long period and 76 (30.0) did not know the advantage of the methods. Acting for a long period was also reported for IUCD by 152 (44.4) and 114 (45.0) did not know its advantage. More than two-third and about half women did not know the advantages of vasectomy and tubal ligation respectively (Table 3).

#### Long-acting and permanent family planning methods intention

Almost one in five 157 (45.9%) women intended to use long-acting and permanent family planning either to space or limit birth. More than seven in ten 113 (71.9%) women intended to use LAPM in the future 12 months. Implants were the most likely long-acting family planning methods intended by the study participants 98 (86.7%) followed by IUCD 32 (28.3%). Having 'no choice' and 'to give birth of many children' were mentioned as reasons not to intend to use LAPM (Table 4).

As shown in Table 5, age, educational status of both the women and their husbands and occupation were found to be statistical significantly

Variables	Frequency (n=342)	Percent
<b>Age (years)</b>		
15-19	20	5.8
20-24	64	18.7
25-29	107	31.3
30-34	60	17.5
35-39	43	12.6
40-44	31	9.1
45-49	17	5.0
Mean	29.75 (± 7.387 SD)	
<b>Ethnicity</b>		
Amhara	331	96.8
Other	11	3.2
<b>Religion</b>		
Orthodox	287	83.9
Protestant	28	8.2
Muslim	22	6.4
Catholic	5	1.5
<b>Educational status</b>		
No formal education	73	21.3
Grade 1-8	65	19.0
Grade 9-12	105	30.7
Grade 12+	99	28.9
<b>Husband's Educational status</b>		
No formal education	35	10.2
Grade 1-8	52	15.2
Grade 9-12	86	25.1
Grade 12+	169	49.4
<b>Family size (in number)</b>		
<5	214	62.6
>=5	128	37.4
Mean	4.01 (± 1.50 SD)	
<b>Occupation</b>		
Housewife	131	38.3
Government employed	81	23.7
Self-employed	51	14.9
Daily laborer	21	6.1
Farmer	7	2.0
Student	35	10.2
Other	16	4.7
<b>Husband's occupation</b>		
Government employed	162	47.4
Self-employed	76	22.2
Daily laborer	42	12.3
Farmer	11	3.2
Student	12	3.5
Other	39	11.4
<b>Monthly income (in USD)</b>		
<30	115	33.6
30-52	105	30.7
52-80	27	7.9
>=80	95	27.8
Mean	65.05 (± 64.80 SD)	
<b>Means of communication</b>		
Yes	318	93.0
No	24	7.0

**Table 1:** Socio-demographic and economic characteristics of married 15-45 years women in Debreworkos town, northwest Ethiopia, June 2013

associated socio-demographic characteristics for intending to use LAPM. However, only age and educational status of the husband was significant predictors of LAPM intention. Moreover, reproductive health histories including number of children ever born, number of children wanted in live, discussion of FP methods with husband, knowledge of LAPM, ever use of modern FP method and its duration, method shift and current use of the modern methods were significant on bivariate analysis. Furthermore, number of children wanted in live, discussion about FP methods with husband, duration of FP use (in years), method shift and current use of the methods were statistical significant on multivariable analysis. Women near to their menopause were 94% more likely intend to use LAPM (AOR=0.06, 95% CI: 0.01-0.51) (Table 5).

## Discussion

The data for this particular issue were generated from study done on uptake of LAPM in Debreworkos town in 2013. About one-quarter (25.4%) married women were using LAPM and more than one in ten (45.9%) intend to use in the future making 71.3% total demand for LAPM. This finding is less than as compared to a study in northern Ethiopia that revealed LAPM intention among reproductive age group women to be 48.4% [14]. This result revealed significant increase in demand for LAPM in Ethiopia alerting stakeholders to improve method mix the methods [15]. Implants were long-acting methods intended to be used by most women followed by IUCD and tubal ligation; this in line with other study where 69% women prefer to use norplant [16]. Having no choice for the methods attributed for not intending to use LAPM among 21% women followed by tending to have many children (20.5%) allowing a room for increasing method mix and health promotion activities by stakeholders. Fear of the procedures and method permanence were also coined as significant reasons for the women's future intention [11,17]. The intention of using LAPM increases as age increases; this might be due to achievement of the

Variables	Frequency (n=342)	Percent
<b>Age at marriage (in years)</b>		
<18	82	24.0
>=18	260	76.0
Mean	20.16 (± 3.61 SD)	
<b>Ever gave birth</b>		
Yes	278	81.3
No	64	18.7
<20	58	20.86
>20	220	79.14
Mean	22.36 (± 3.65 SD)	
<b>Number of children ever born (n=278)</b>		
1	84	30.2
2-3	126	45.3
4-5	57	20.5
6+	11	4.0
Mean	2.42 (± 1.45 SD)	
<b>Alive children currently (n=278)</b>		
<5	258	92.8
>=5	20	7.2
Mean	2.25 (± 1.22 SD)	
<b>More children needed (n=278)</b>		
0	75	26.9
1	73	26.2
2	94	33.8
3	30	10.7
>=4	6	2.1
Mean	1.37 (± 1.06 SD)	
<b>Want child within two years</b>		
Yes	114	33.3
No	228	66.7
<b>Do not wanted child within two years (n=228)</b>		
Space	155	67.9
Limit	73	32.1
<b>Number of children wanted in live</b>		
<5	181	82.2
>=5	61	17.8
Mean	3.56 (± 1.09 SD)	
<b>Ever discuss FP methods with husband</b>		
Yes	310	90.6
No	32	9.4
<b>Decision on number of children</b>		
Husband	19	5.6
Wife	10	2.9
Both	265	77.5
God/Allah	48	14.0

**Table 2:** Reproductive history of married 15-49 years women in Debreworkos town, Northwest Ethiopia, June 2013.

Variables	Frequency (n=253)	Percent
<b>Advantages of implants*</b>		
Effectiveness	59	23.3
Act for a long time	189	74.7
No problem during breast feeding	49	19.3
Require minor surgery to insert/remove	70	27.6
No problem on routine activities	40	15.8
Possible to remove and become pregnant	107	42.2
Minimal side effect	18	7.1
Other	2	0.7
Do Not Know	76	30.0
<b>Advantages of IUCD*</b>		
Effectiveness	38	15.0
Acts for a long time	152	44.4
No problem on breast feeding	38	15.0
Not needed for women with STIs	40	15.8
No problem on intercourse	44	17.3
Possible to remove and become pregnant	99	39.1
Minimal side effect	22	8.6
Other	2	0.7
Do Not Know	114	45.0
<b>Advantages of vasectomy*</b>		
Effective after 3 months	25	9.8
Acts permanently	117	46.2
Easy and comfortable	10	2.9
Avoids repeated HI visit	27	10.6
No problem on intercourse	21	8.3
No known long-term side effect	6	2.3
Requires counseling and consent	35	13.8
Other	5	1.9
Do Not Know	175	69.1
<b>Advantage of tubal ligation*</b>		
Effective after 3 months	48	18.9
Acts permanently	148	58.4
Easy and comfortable	34	13.4
Avoids repeated HI visit	56	22.1
No problem on intercourse	43	16.9
No known long-term side effect	18	7.1
Requires counseling and consent	56	22.1
Other	2	0.7
Do Not Know	128	50.5

**Table 3:** Knowledge of long-acting and permanent FP methods of married 15-49 years women in Debreworkos town, Northwest Ethiopia, June 2013 (\* Multiple responses were possible.)

Variables	Frequency	Percent
<b>Intend to space/limit birth by LAPM</b>		
Yes	157	45.9
No	185	54.1
<b>Reasons for not to intend LAPM (n=185)</b>		
Fear of side effect	21	11.3
Lack of knowledge	16	8.6
No choice	39	21.0
No pregnancy risk	17	9.1
Give more birth	38	20.5
Husband not voluntary	8	4.3
Religious influence	9	4.8
Fear of infertility	17	9.1
Other	30	16.2
<b>Want LAPM in the future 12 months (n=157)</b>		
Yes	113	71.9
No	44	28.1
<b>LAPM intended to be used (n=113)</b>		
Implants	98	86.7
IUCD	32	28.3
Tubal ligation	23	20.3
Vasectomy	3	2.6

**Table 4:** Long-acting and permanent family planning methods intention of married 15-49 years women in Debreworkos town, Northwest Ethiopia, June 2013

desired number of children. Discussion on FP methods with husbands showed positive association with LAPM intention as more information regarding the methods would be more disclosed enhancing the desire towards these methods. Moreover, longer duration of using any FP method, ever shift of the methods and current use of any of the

methods were positively associated with intention of LAPM attributing for overall exposure to more effective methods.

## Conclusion

Generally, LAPM intention was found to be high among married

Variables	LAPM intention		COR (95%CI)	AOR (95%CI)	p-value
	Yes	No			
Age					
15-19	10	10	1	1	
20-24	22	42	0.06 (0.01-0.57)	0.09 (0.01-1.03)	
25-29	53	54	0.11 (0.02-0.96)	0.19 (0.02-1.67)	
30-34	35	25	0.06 (0.01-0.50)	0.12 (0.01-0.99)*	0.009
35-39	26	17	0.04 (0.01-0.36)	0.07 (0.01-0.55)*	0.003
40-44	10	21	0.04 (0.01-0.34)	0.06 (0.01-0.51)*	0.003
45-49	1	16	0.13 (0.02-1.13)	0.18 (0.02-1.67)	
Educational status					
No formal education	20	53	1	1	
Grade 1-8	31	34	0.41 (0.20-0.84)	1.78 (0.60-5.24)	0.015
Grade 9-12	49	56	0.43 (0.23-0.82)	1.05 (0.43-2.58)	0.010
Grade 12+	57	42	0.28 (0.15-0.53)	1.35 (0.67-2.69)	0.001
Educational status of husband					
No formal education	7	28	1	1	1
Grade 1-8	16	36	0.56 (0.20-1.55)	3.84 (1.15-12.81)*	0.028
Grade 9-12	41	45	0.27 (0.11-0.69)	1.70 (0.71-4.08)	0.006
Grade 12+	93	76	0.20 (0.09-0.49)	1.11 (0.59-2.08)	0.001
Occupation					
Housewife	53	78	1	1	
Gov't employed	46	35	0.51 (0.29-0.91)	1.01 (0.32-3.11)	
Self-employed	26	25	0.65 (0.34-1.25)	0.87 (0.25-2.98)	
Daily laborer	7	14	1.36 (0.51-3.59)	0.82 (0.25-2.72)	0.021
Farmer	3	4	0.91 (0.19-4.21)	1.44 (0.34-6.09)	
Student	15	20	0.91 (0.43-1.93)	0.30 (0.04-2.25)	
Other	7	9	0.87 (0.31-2.49)	1.02 (0.26-4.03)	
Child -(ren) ever born					
0	7	3	1	1	
1	35	49	4.90 (0.96-25.02)	0.55 (0.06-4.42)	
2-3	65	61	3.59 (0.70-18.40)	2.96 (0.657-13.4)	
4-5	24	33	7.00 (1.24-39.49)	1.91 (0.44-8.24)	0.027
6+	5	4	0.12 (0.01-12.30)	0.67 (0.13-17.8)	
Children wanted in live					
<5	121	137	1.79 (1.003-3.183)	0.41 (0.20-0.82)*	0.049
>=5	8	11	1	1	
Ever discuss FP methods with husband					
Yes	153	157	0.15 (0.05-0.43)	0.13 (0.04-0.47)*	0.001
No	4	28	1	1	
Know LAPM					
Yes	130	123	0.41 (0.256-0.69)	1.24 (0.27-5.66)	0.001
No	27	62	1	1	
Ever heard LAPM last 12 months					
Yes	132	125	0.45 (0.24-0.83)	0.29 (0.13-2.99)	0.01
No	18	38	1	1	
Ever used modern FP method					
Yes	148	156	0.33 (0.15-0.71)	0.45 (0.42-0.89)	0.005
No	9	29	1	1	
Duration used (years)					
<1	34	54	1	1	
>=1	117	104	0.59 (0.36-0.99)	1.85 (1.04-3.29)*	0.044
Ever shifted FP method					
Yes	53	30	0.44 (0.26-0.73)	0.53 (0.31-0.93)*	0.002
No	96	125	1	1	
Currently using any modern FP methods					
Yes	129	96	0.23 (0.14-0.39)	0.30 (0.17-0.55)*	0.001
No	28	89	1	1	

**Table 5:** Bivariate and multivariable analysis of LAPM intention and selected variables of married 15-49 years women in Debreworkos town, Northwest Ethiopia, June 2013 (\*significant variables on multivariable analysis)

women either to space or limit their pregnancy. Age and education were significantly related socio-demographic factors affecting women's intention. Moreover, exposure to any of the modern family planning methods positively affected LAPM intention. However, having less access for method mix, interest in giving more birth and fear of side effects were among the reasons not to intend LAPM.

## Recommendations

Health promotion activities on the benefits of long-acting and permanent family planning must be undertaken to increase women's awareness. Long-acting and permanent family planning methods mix should be scaled up to enhance the desire to use and increase more effective methods uptake.



## Implication of the Study

The finding would be used as baseline evidence for family planning commodity planners, managers and relevant stakeholders to be able to secure family planning commodities in line with the need of the catchment population.

## References

1. Iqab H Shah (2008) Family Planning and Reproductive Health. Department of Reproductive Health and Research, World Health Organization.
2. USAID (2009) Assessing the Commercial Viability of Long-acting and Permanent Contraceptive Methods. Private Sector Partnerships-One project.
3. Fabamwo A Olusegun, Wright K Olulade, Akinola O Iret (2012) Minimising the Risk of Unwanted Pregnancies among Female University Undergraduates in Lagos, Nigeria: The Quantum of Knowledge and use of Long-acting Reversible Contraceptives. *Research Journal of Medical Sciences* 6: 181-186.
4. D'Arcangues C (2001) Family planning needs: new opportunities, emergency contraception and other new technologies. *Reprod Biomed Online* 3: 34-41.
5. Bongaarts J, Johansson E (2002) Future trends in contraceptive prevalence and method mix in the developing world. *Stud Fam Plann* 33: 24-36.
6. Andrew L Gray, Jennifer A Smit, Ntsiki Manzini, Mags Beksinska (2006) Systematic Review of Contraceptive Medicines: Does Choice Make a Difference. Reproductive health and HIV research unit.
7. USAID (2011) Quantification of Health Commodities: Contraceptive Companion Guide. Forecasting Consumption of Contraceptive Supplies.
8. Credé S, Hoke T, Constant D, Mackenzie S Green, Moodley J, et al. (2012) Factors Impacting Knowledge and use of Long-acting and Permanent Contraceptive Methods by Postpartum HIV Positive and Negative Women: A Cross-sectional study in Cape Town, South Africa. *BMC Public Health* 12: 197.
9. Alemayehu M, Belachew T, Tilahun T (2012) Factors associated with Utilization of Long-acting and Permanent Contraceptive Methods among Married Women of Reproductive Age in Mekelle town, Tigray region, North Ethiopia. *BMC Pregnancy and Childbirth* 12: 6.
10. Megabaw B (2012) Awareness and utilization of modern contraceptives among street women in North-West Ethiopia. *BMC Womens Health* 12: 31.
11. Intra Health International (2008) Family Planning in Rwanda: How a Taboo Topic Became a Number One Priority.
12. Bunce A, Guest G, Searing H, Frajzyngier V, Riwa P, et al. (2007) Factors affecting vasectomy acceptability in Tanzania. *Int Fam Plan Perspect* 33: 13-21.
13. Dubiwak R, Seme A (2014) Contraceptive method choice and use by married women of reproductive age in two Districts of East Harerge. *Ethiop Med J* 52: 27-35.
14. Gebremariam A, Addissie A (2014) Intention to use long acting and permanent contraceptive methods and factors affecting it among married women in Adigrat town, Tigray, Northern Ethiopia. *Reprod Health* 11: 24.
15. Rahman M (2008) A Potential Contraceptive Method Mix for the Ethiopian Family Planning Program. *Journal of Family Planning and Reproductive Health Care* 34: 213-218.
16. Takele A, Degu G, Yitayal M (2012) Demand for Long-acting and Permanent Methods of Contraceptives and Factors for Non-use among Married Women of Goba Town, Bale Zone, South East Ethiopia. *Reproductive Health* 9: 26.
17. Ketende C, Gupta N, Bessinger R (2003) Facility-level reproductive health interventions and contraceptive use in Uganda. *Int Fam Plan Perspect* 29: 130-137.