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Research

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Factors associated with utilization of standard days method of family planning among market vendors in Gulu City

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Abstract

Introduction: *standard days method (SDM) is a family planning method in which users avoid unprotected sexual intercourse during cycle days 8 through 19. Its efficacy is 95% and 88% in perfect and typical use respectively when used among women whose cycles are between 26-32 days. Classified as a modern contraceptive, can be used to bridge the gap brought by fear of side effects, cost, cultural and religious opposition to the modern hormonal method. The study, therefore, seeks to look at the factors associated with choosing or continuing to use SDM as a method of family planning in the Gulu City main market.* ***Methods:*** *this was a cross-sectional analytical study among women of reproductive age in Gulu main.*

Results: *a total of 248 women were included in the final analysis. Women who heard about SDM, understand their menstrual cycle, believe in a high possibility of conception within their cycle, have very good thoughts and good thoughts about the method were more likely to choose or continue using the method; P-values 0.061, 0.08, 0.002, 0.001 and, 0.001 respectively. Recommendation to use the method was a positive predictor for using the method, P-value <0.001, meanwhile, some knowledge and little knowledge about the method were negative predictive factors for using SDM, P-values 0.038 and 0.020 respectively.* ***Conclusion:*** *intervention aimed at improving knowledge about SDM among the population may help increase use of SDM to reduce incidences of unintended pregnancies and meet contraceptive unmet needs among women not comfortable using the modern hormonal contraceptives.*

Introduction

The standard days method (SDM) is a fertility awareness-based method of family planning in which users avoid unprotected sexual intercourse during cycle days 8 through 19 [1]. It is a simple, effective method shown to have 95% and 88% efficacy in perfect and typical use respectively [2] and ultimately classified as a modern method of contraception by the World Health Organization, although less emphasis is put in, this means that most governments may not put investments or include it in the training curricular [3]. What makes it a modern method is that it is effective at pregnancy prevention, safe, based on a sound understanding of reproductive biology, with a clearly defined protocol for correct use, and had been tested in appropriately designed studies [3]. Although claimed and classified as a modern method, there has been disagreement about this inclusion. Kristen *et al.* described this method as a non-modern method as this is assumed that the woman will choose to say no to sex, the liberty that is lacking in up to 50% of women experiencing coercion and sexual violence worldwide [4]. Nonetheless, the method helps women learn their menstrual cycle and involves men in family planning as the couple discuss and decide how to manage the fertile days [1]. It is most effective for women whose cycles range between 26 to 32 days although it has some efficacy for women outside of this range [1, 5, 6]. Besides, the method helps women learn their menstrual cycle and involves men in family planning as the couple discusses and decides how to manage the fertile days [1]. Knowledge of the fertile period is a big factor in reducing unintended pregnancy in a Ugandan study [7]. Fear of side effects and its cost of treatment has been shown as the main obstacle in the provision of modern contraceptives in a study done in Atiak, Amuru District [8] SDM will be a perfect solution in addressing such barriers. Reproductive health problems always result from a high fertility rate as it stands at 5.4 children per woman in Uganda, 67% of married women have demand for family planning in Uganda but utilization of family planning services still stands at 39% and 28% have an unmet need for family planning, 83% of sexually active unmarried women have demand for family planning services however 51% of them utilize family planning services and up to 32% of them have an unmet need for family planning services [9]. The use of the modern family method is low in Gulu District standing at 47.5% [10]. SDM although classified as a modern method, its promotion in Gulu may help to bridge the low contraceptive prevalence and reducing unmet needs of family planning in Gulu city Although hormonal methods of family planning are widely used, it is associated with numerous barriers which include; fear of side effects such as inter-menstrual spotting, nausea, breast tenderness, missed periods; cost of the method; cultural and religious opposition; pressure from family members and friends to avoid artificial contraception; lack of knowledge about the type and source of contraceptive methods as well as misinformation. The study, therefore, seeks to look at the factors associated with choosing or continuing to use SDM as a method of family planning in the Gulu City main market.

Methods

Study design and location: this was a cross-sectional analytical study among women of reproductive age who are vendors in Gulu Main Market as a representative of women in Gulu City. Gulu Main Market is located in the Eastern Division of Gulu City, Northern Uganda. This site was chosen because the participants come from various parts of the City and beyond, thus a better representation. All women who were present on the days of the interview and who are in the age bracket of 15-49 years were included for enrolment. Those who had hearing difficulties or speech problems were excluded from the interviews.

Sampling methods: the minimum sample size was estimated using Kish Leslie 1965. The prevalence of people who have heard about the method is 20% [11] was used to calculate the minimum sample size of 246 participants. A systematic sampling method was used and with an estimated population of women of reproductive age who are vendors Gulu's main market being 700, our sampling interval was 3. The entries to the market were marked and used as a reference point for sampling. The first three market stalls owned by a woman were labeled from one (1) to three (3) and the first participants were chosen using a ballot system and the subsequent participants were chosen at intervals of three stalls until the last recruited participant for that day. The last participant´s stall for the day was labeled and this acted as a reference for subsequent enrolment the next day. All the sampled stalls are labeled to avoid repetition.

Data collection and management: pre-tested interviewer-administered questionnaires were used to assessed dependent and independent variables. Questionnaires were checked daily; data were double entered into Epidata 3.1 and stored in a password-protected computer only accessible to the study team and exported to Statistical Package for Social Science (SPSS version 19.0).

Statistical analysis: data were analysed by using SPSS (version 19.0, IBM) with the objective to look at the predictive factors for choosing or continuing to use SDM. Participant´s socio-demographic data were expressed as frequencies and percentages. Bivariate analysis was conducted (chi-square) to determine the association between the independent categorical variables on choosing or continuing to use SDM on. All explanatory variables that achieved a P-value <0.05 from bivariate analysis were subsequently included in the multivariable analysis. Logistic regression analysis was performed to obtain the crude odds ratio, adjusted odds ratio and their 95% confidence interval, as well as to determine factors associated with choosing or continuing to use SDM. The significance level in this study was set at P<0.05.

Ethical considerations: ethical clearance from Gulu University Research and Ethics Committee was obtained, consent from the Gulu Main market authority, and consent from research participants was obtained. Confidentiality was ensured. A well-elaborated informed consent form was provided and explained to participants who signed acknowledging their acceptance to participate in the study before administering the questionnaire. They were assured of their liberty to withdraw at any time when they feel like it.

Results

A total of 248 market vendors were interviewed from 322 screened. The majority of the respondents were young women aged 15-25 years (47.2%) from the Acholi sub-region. They were mainly single mothers (43.1%) who attained a secondary level of education (36.7%) and practice catholic as their religious affiliation (52.8%) as in Table 1. Multivariate Table 2 shows factors associated with choosing to use SDM or continuing to use SDM as a method of family planning. The study found out the following; women who have heard about the SDM were 2.7 times more likely to choose or continue using it as a form of family

planning methods as compared to those who have not heard (OR=2.7 CI (0.62-11.88) and this is not statistically significant, P-value 0.061. Women with some knowledge and little knowledge were less likely to use SDM or continuing to use SDM as a method of family planning respectively as compared to women with full knowledge on the SDM and this was significant with P-values 0.038 and 0.020 respectively. Women who understand their menstrual cycle are 4.5 more likely to use SDM or continuing to use SDM as a method of family planning and this was a statistically significant P-value 0.08. Those who believe in the high possibility of conception during the menstrual cycle are 2.7 more likely to use SDM or continuing to use SDM as a method of family planning and this was significant since the P-value 0.002. women who have very good thought and good thought about the SDM are 14 and 5.7 times more likely to use SDM or continuing to use SDM respectively compared to those with average thought, P-values 0.001 and, 0.001 respectively. Women who recommend others for SDM as a form of family planning are 24 times more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t completely recommend, P-value <0.001 and those who strongly recommend are 2.14 more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t completely recommend as this significant P-value <0.001. Women who recommend SDM promotion by government and other stakeholders are 9.3 more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t recommend it, and this was significant, P-value <0.001. Additionally, those who strongly recommend are 26 more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t recommend to for its promotion and this is significant since P-value <0.001, women are currently using SDM are 14 times more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who are not using it and this is significant, P-value 0.002 and shown in Table 2.

Discussion

To the best of our knowledge, this is the first study done in Gulu City looking at the factors associated with choosing or continuing to use SDM as a method of contraception. Women with some knowledge and little knowledge are less likely to use SDM or continue to use SDM as a method of family planning compared to women with full knowledge, P-value 0.038, OR 0.1 CI (0.01-0.91) and P-value 0.02, OR=0.08 CI (0.00-0.69) respectively. Knowledge about the method informs attitude that may help a woman to choose the method or continue using the method. These findings replicate a pre-experimental one-group pre-test and post-test research design in India that shows that knowledge improves the attitude of students about SDM [12]. Paradoxically, hearing about SDM is statistically not significant from this study (P=0.061), not agreeing with an earlier study in India and Peru which found out that hearing about SDM increases the person´s chances of using the method from 0 to 59% and 0 to 64% respectively [13].

Women who understand their menstrual cycle are 4.5 times more likely to use SDM or continue to use SDM as a method of family planning P-value 0.08 compare to others who do not understand. This indicates that understanding one´s cycle increases the chance of someone understanding their fertile windows and hence can use SDM. Additionally, women who knew about the high possibility of conception during the menstrual cycle are 2.7 more likely to use SDM or continue to use SDM as a method of family planning and this is significant since the P-value 0.002 OR=2.7 (1.43-5.45). This is most likely because it is easier for them to avoid intercourse in that period which increases the method´s efficacy. This is consistent with findings [14]. It was found out that, 87% of those who had intercourse during their high fertile window got pregnant, while 5% of those who had

intercourse outside the low fertile window got pregnant. Study findings further show that women who have a very good and good thought about the SDM are more likely to use or continue the method compared to those with average thought. OR=14, CI (2.94-71.21) and OR=5.7 CI (2.30-14.25) P-values 0.001 and 0.000 respectively. Those with bad thoughts were less likely to use the methods compared to those with an average thought about SDM and this was statistically significant at P-value 0.015 OR 0.09(CI 0.01-0.83). Therefore, having good thoughts about the method increases the chances of using it. The good thoughts about the method could most likely be attributed to influence from friends, the method not interfering with the religious belief, having no or minimal effects on their health. The above findings concur with a prospective cohort study involving 993 women in Turkey [15].

In regards to the recommendation, study findings indicate that women who recommend others for SDM as a form of family planning are 24 times more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t completely recommend and this is significant P-value 0.000, OR=24, CI(7.76-77.68), furthermore, those who strongly recommend are 2.14 more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t completely recommend P-value <0.001. the wide confidence intervals among those who recommend the method and confidence intervals including one (1) among those who strongly recommend depict that these findings could have occurred by chance. Nevertheless, women who recommend a method should have confidence in the method, most likely based on the knowledge about it, and would easily recommend others to use it. Therefore, the participants might more likely continue using the method. This finding is consistent with a study that found out that over 94% of SDM users had high intention to continue using it [16] and also confirms earlier proof of concept study in Gulu that showed that women were more willing to recommend the methods to others [17]. Regarding SDM promotion, those women who recommend SDM promotion by government and other stakeholders are 9.3 more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t recommend, OR=9.3 CI (2.75-39.34) 0.000. Additionally, those who strongly recommend are 26 more likely to use SDM or continuing to use SDM as a method of family planning as compared to those who don´t recommend it for its promotion and this is significant since P-value 0.000 < 0.05, OR=26, CI (8.13-84.66). Therefore, this group of participants most likely wish that the method should have a bigger coverage since they were confident with the method or have high hopes of its usefulness as has been seen elsewhere [12].

Conclusion

SDM is classified as a modern method of contraception with documented efficacy of 95% in perfect use and 88% in typical use. Knowledge of the factors associated with its usage is key in improving contraceptive coverage among couples who are currently not using any method. This will help to reduce; the high rate of unintended pregnancy in Uganda, the contraceptive's unmet needs. This study brings the factors that promote the use of SDM and intervention that will help to increase the access to SDM and help in promoting knowledge of the methods and this can be done very well when the women are the ones promoting such knowledge among their fellow women. The limitations in this study are related to the cross-sectional survey whose findings may not reflect the true picture of the behavior of women which changes over time. There are partner factors that have a big bearing on this method and this has not been brought forward and could be better done when men are involved. With a significant marital sexual coercion and patriarchal society, the utility and efficacy of SDM are questionable. Future studies should look at a bigger sample including men and implore how

women overcome force sex while using this method.

What is known about this topic

- *Effectiveness of standard days' methods of family planning;*
- *SDM being of choice especially among some religious believers who prefer not to use modern hormonal contraceptives.*

What this study adds

- *Factors associated with the utility of the method in Gulu;*
- *Strategies for promoting SDM usage in Gulu;*
- *Attitudes and perception of SDM among women in Gulu.*

Competing interests

The authors declare no competing interest.

Authors' contributions

Robin Acire, Philip Acidri, and Pasquale Angolere; conceived, designed the study, participated in data collection, analysis, discussions and drafted the manuscript. Francis Pebolo Pebalo; participated in study conception and design supervised the study and drafted the manuscript. All authors read and approved the final version of the manuscript.

Tables

Table 1: socio-demographic details of the respondents

Table 2: factors associated with choosing or continuing to use SDM

References

1. Marcos A, Victoria J, Irit S. Efficacy of a new method of family planning; the standard days method. Contraception. 2002 May;65(5): 333-8. **PubMed**| **Google Scholar**
2. Marcos A, Beth Y, Irit S, Rosario P, Victoria J. Adding the Standard Days Method® to the contraceptive method mix in a high-prevalence setting in Peru. Rev Panam Salud Publica. 2010 Aug;28(2): 80-5. **PubMed**| **Google Scholar**
3. Shawn M, Jeff S, Madeleine SF, Sandra J, Ellen HS, Clifton K. Fertility Awareness Methods: Distinctive Modern Contraceptives. GGlob Health Sci Pract. 2016 Mar 25;4(1): 13-5. **PubMed**| **Google Scholar**
4. Kirsten A, Anita C, Alejandra C, Rodrigo B, Danessa L, Cecilia M *et al.* Fertility awareness methods are not modern contraceptives: defining contraception to reflect our priorities. Glob Health Sci Pract. 2016; 4(2): 342-345. **PubMed**| **Google Scholar**
5. Arévalo M, Sinai I, Jennings V. A fixed formula to define the fertile window of the menstrual cycle as the basis of a simple method of natural family planning. Contraception. 1999 Dec;60(6): 357-60. **PubMed**| **Google Scholar**
6. Wilcox A.J Dunson D, and Baird DD. The timing of the "fertile window" in the menstrual cycle: day specific estimates from a prospective study. Bmj. 2000; 321(7271): p. 1259-1262. **PubMed**| **Google Scholar**
7. Wasswa R, Kabagenyi A, Atuhaire L. Determinants of unintended pregnancies among currently married women in Uganda. J Health Popul Nutr. 2020 Dec 7;39(1): 15. **PubMed**| **Google Scholar**

8. Ouma S, Turyasima M, Acca H, Nabbale F, Obita KO, Rama M *et al*. Obstacles to family planning use among rural women in Atiak Health Center Iv, Amuru District, Northern Uganda. East Afr Med J. 2015;92(8): 394-400. **PubMed**| **Google Scholar**
9. Uganda Bureau of Statistics -UBOS and ICF. Uganda Demographic and Health Survey 2016. 2018, UBOS and ICF: Kampala, Uganda.
10. Christopher Garimoi O, George O, Juliet FA, Richard A, Stephen AO, Beatrice O. Perceptions, attitude and use of family planning services in post conflict Gulu district, northern Uganda. Confl Health. 2015 Aug 11;9: 24. **PubMed**| **Google Scholar**
11. Irit S, Rebecka L, Marcos A, Victoria J. Fertility awareness-based methods of family planning: predictors of correct use. Int Fam Plan Perspect. 2006 Jun;32(2): 94-100. **PubMed**| **Google Scholar**
12. Menachery PB, Noronha JA, and Fernanades S. Improving the Knowledge and Attitude on Standard Days Method of Family Planning Through a Promotional Program Among Indian Postgraduate Students. Journal of obstetrics and gynaecology of India 2017; 67(4): 286-290. **PubMed**| **Google Scholar**
13. Wright K, Iqteit H, Hardee K. Standard Days Method of Contraception: Evidence on Use, Implementation, and Scale Up. 2015. **Google Scholar**
14. Qiyan M, Richard JF. Efficacy of achieving pregnancy with fertility-focused intercourse. MCN Am J Matern Child Nurs. Jan-Feb 2014;39(1): 35-40. **PubMed**| **Google Scholar**
15. Kursun Z, Cali S, Sakarya S. The Standard Days Method
16. (®): efficacy, satisfaction and demand at regular family planning service delivery settings in Turkey. Eur J Contracept Reprod Health Care. 2014 Jun;19(3): 203-10. **PubMed**| **Google Scholar**
17. Wright K, Hiba Iqteit, and Karen Hardee. Standard Days Method of contraception: Evidence on use, implementation, and scale up; Working paper., in Population Council, The Evidence Project. 2014. **Google Scholar**
18. Lillian O, Dickens O, Lauren D, Jeannette C, Esther S. Testing a proof of concept model for group couples counseling in family planning in Northern Uganda. Pan Afr Med J. 2018 Jun 27;30: 179. **PubMed**| **Google Scholar**

Table 1: socio-demographic details of the respondents		
Parameters	**Frequency (N=248)**	**Percentage (%)**
Age groups		
15-25	117	47.2%
26-35	105	42.3%
36-49	26	10.5%
Tribes		
Acholi	194	78.2%
Alur	05	2.0%
Lango	18	7.3%
Baganda	07	2.8%
Others	24	9.7%
Religion		
Catholic	131	52.8%
Anglican	56	22.6%
Pentecostal	51	20.6%
Moslem	07	2.8%
Others	03	1.2%
Level of educations		
Secondary	91	36.7%
Tertiary	52	21.0%
Undergraduate	44	17.7%
Primary	43	17.3%
Informal	10	4.0%
Graduate	8	3.2%
Marital status		
Single	107	43.1%
Married	94	37.9%
Cohabiting	32	12.9%
Separated/Divorced	15	6.0%

Table 2: factors associated with choosing or continuing to use SDM					
Parameters	**choosing to use SDM or continuing to use**		**Crude odds ratio (95%, CI)**	**Adjusted odds ratio (95%, CI)**	**P-value**
	Yes	**No**			
Heard about SDM	**n=93**	**n=73**			
Yes	90	65	4 (0.95-14)	2.7 (0.62-11.88)	0.061
No	03	08	1	1	
Knowledge of using SDM	**n=90**	**n=64**			
Fully knowledgeable	11	01	1	1	
Some knowledge	28	24	(0.13-0.88)	(0.01-0.91)	0.038**
Little knowledge	34	37	0.08 (0.01-0.68)	0.08(0.00-0.69)	0.020**
No Knowledge	17	02	0.77 (0.06-10)	0.85(0.07-10.80)	0.841
Understanding of menstrual cycle	**n=93**	**n=73**			
Yes	89	60	5 (1.50-13.1)	4.5(1.20-17.22)	0.008**
No	04	13	1		
Possibility of conception within menstrual cycle	**n=93**	**n=63**			
Yes	62	26	3 (1.46-5.00)	2.7 (1.43-5.45)	0.002**
No	31	37	1		
Days of high possibility of conception	**n=93**	**n=73**			
8-19th day	28	11	1		
Other	65	62	0.41 (0.18-0.90)	0.50 (0.23-1.10)	0.026**
Thoughts about SDM	**n=91**	**n=56**			
Average	18	24	1		
Bad	01	18	0.07 (0.00-0.61)	0.09 (0.01-0.83)	0.015**
Good	50	12	6 (2.3-13.36)	5.7 (2.30-14.52)	0.000**
Very good	22	02	15 (3.04-70.59)	14 (2.94-71.21)	0.001**
Recommendation	**n=93**	**n=63**			
Not completely	04	39	1c		
Recommend	59	24	23 (7.72-74.43)	24 (7.76-77.68)	0.000**
Strongly	30	0	4 (0.04-0.29)	2.14 (0.29-3.69)	0.000**
Promotion by government and stakeholders	**n=93**	**n=63**			
Not completely	04	26	1		
Strongly recommend	33	02	107(18.20-3.18)	26 (8.13-84.66)	0.000**
Recommend	56	35	10 (3.35-32.22)	9.3 (2.75-39.34)	0.000**
Using it currently	**n=93**	**n=73**			
Yes No	25 68	01 72	26 (3.39-20.07) 1	14 (4.20-34.19)	0.002**
signifies significance between the variables under test, **CI: Confidence interval					