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Original Research Article

The knowledge and use of misoprostol among women in a Nigerian population

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ABSTRACT

Background: Increasing the availability and accessibility of misoprostol in low resource settings has been advocated to reduce maternal deaths from primary postpartum haemorrhage (PPH). WHO recommends a strategy of antenatal distribution of misoprostol to pregnant women, for self-administration for the prevention of PPH, in settings where women are likely to give birth outside of a health facility or in the absence of skilled health personnel. The success of such strategies depends on the current knowledge and acceptability of misoprostol among women in such population. The aim of this study was that we assessed the knowledge and use of misoprostol among Nigerian women.

Methods: It was a prospective cross-sectional population based survey in which 16445 consenting women, from randomly selected households and communities across the 20 local government areas (LGA) of Lagos state, had in-depth interview with the aid of an interviewer administered structured questionnaire to assess their knowledge and use of misoprostol. Data obtained were presented in frequency and proportions.

Results: Thirteen per cent and 6.5% of the respondents were aware of drugs that could be used to terminate pregnancy and stop bleeding following childbirth, respectively. Only 5.2% of the women were aware of misoprostol, two-third (67%) of which knew it could be used to terminate pregnancy and 5% of women aware of misoprostol knew it could be used to reduce or stop bleeding following childbirth. Only 2.3% of the entire study population admitted to personal use of misoprostol.

Conclusions: Knowledge about the safe, life-saving and effective use of misoprostol among Nigerian women is low. There is need to disseminate information about misoprostol especially in settings where women are likely to give birth outside of a health facility or in the absence of skilled health personnel.

Keywords: Misoprostol, Cytotec, Misoprostol use

INTRODUCTION

Misoprostol is a drug that was originally produced to prevent gastrointestinal ulcers.¹ It has gained widespread recognition for safety and effectiveness for its initial off-

label uses in obstetrics and gynaecology, due to its uterotonic properties, to induce labour, prevent and treat PPH and manage abortion; clinical conditions that are the major drivers of the high maternal mortality rates in sub Saharan Africa.² Misoprostol is cheap and stable at room temperature and therefore particularly useful in resource-

poor settings.² Its varied routes of administration include oral, vaginal, rectal, buccal and sublingual allowing for possible self-administration. WHO has recognized misoprostol as a life-saving drug, incorporated recommendations for its use into reproductive health guidelines on induction of labour, prevention and treatment of PPH and management of spontaneous and induced abortion and included it on the list of essential medicines.^{2,3}

The highest rates of maternal mortality worldwide remain domiciled in sub Saharan Africa largely due to contributions from PPH and unsafe abortion among other leading causes.⁴ Increasing the availability and accessibility of misoprostol in low resource settings has been advocated to undoubtedly reduce maternal deaths from PPH.⁵ In 2020, WHO recommended that in settings where women give birth outside of a health facility and in the absence of skilled health personnel, a strategy of antenatal distribution of misoprostol to pregnant women for self-administration is recommended for prevention of PPH.⁶ Observational studies and evaluations have indicated that advance misoprostol distribution programmes can increase coverage of uterotonic use for PPH prevention, with very few reports of incorrect use of misoprostol or adverse events and improved health outcomes.⁶⁻⁸

The use of any medication by an individual will definitely be directly related to the individual's knowledge of such medication. The success of currently recommended misoprostol distribution programs aimed at improving health indices and outcomes in any population is hinged on the knowledge and acceptability of misoprostol among women in that population. We therefore conducted a population based survey to assess the knowledge and use of misoprostol among Nigerian women.

METHODS

Study design

The study was a community based population study.

Study area

The study was conducted in 20 LGA of Lagos State, Nigeria.

This was a population-based, prospective, cross-sectional survey in which 16,455 consenting women, in randomly selected enumeration areas across the 20 LGA of Lagos state, had in-depth interview using an interviewer administered, structured questionnaire designed for the study from January 2015 to December 2017. Designated enumeration areas were randomly selected in each local government. Households were identified and respondents, one woman per household, had questionnaire administered on them.

Inclusion criteria was women above 15 years of age while the exclusion criteria was women below 15 years of age.

The data obtained were analyzed using SPSS, version 22 and frequency and proportions were calculated for categorical variables. Tables and pie charts were used for graphical illustration.

RESULTS

Of the 16445 women in the survey, the proportion of respondents in each of the five year bands was fairly even across the age groups of 15-49 years. Less than 5% of the respondents were 50 years and above (Table 1). About half (54%) of the respondents had either attempted or completed secondary education, while less than 20% were university graduates. Majority were Christians and Muslims constituted a third (34.3%) of the study participants (Table 1).

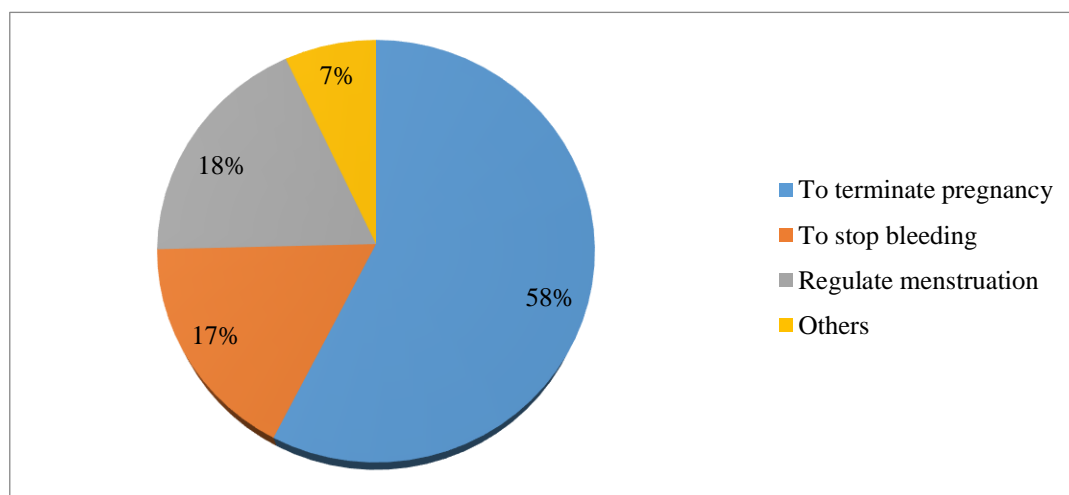


Figure 1: Opinion of respondents on what cytotec is used for.

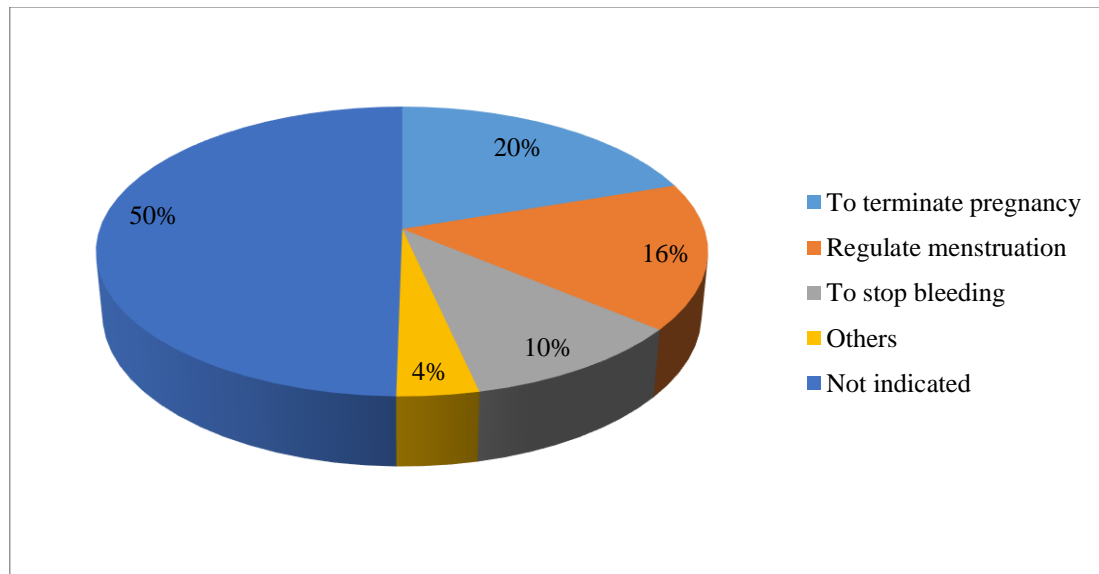


Figure 2: How respondents actually used misoprostol.

Table 1: Socio-demographic characteristics of the respondents (N=16445).

Variables	Number (N=16445)	%
Age group (in years)		
15-19	1440	8.8
20-24	2626	16
25-29	3204	19.5
30-34	2960	18
35-39	2433	14.8
40-49	2401	14.6
50+	641	3.9
Not indicated	740	4.5
Educational Level		
No schooling	855	5.2
Part primary	444	2.7
Primary completed	1348	8.2
Part secondary	1677	10.2
Secondary completed	6946	42.2
Other post-secondary	542	3.3
Part university	1566	9.5
University/poly graduate	2656	16.1
Others	148	0.9
Not indicated	263	1.6
Religion		
Catholic	2059	12.5
Islam	5640	34.3
Traditional	230	1.4
Protestant	1332	8.1
Pentecostal	5640	34.3
Spiritual	1118	6.8
Others	164	1
None	32	0.2
Not indicated	230	1.4

Table 2: Awareness of drugs used to stop bleeding after childbirth.

Do you know of drugs used to stop bleeding after childbirth?	Frequency N=16, 445	%
Yes	1063	6.5
No	14458	87.9
Not indicated	924	5.6
Total	16445	100

Table 3: Awareness of drugs used to terminate pregnancy.

Do you know of drugs to terminate pregnancy?	Number	%
Yes	2128	12.9
No	12599	76.6
Not indicated	1718	10.4
Total	16445	100

Table 4: Awareness of misoprostol among respondents.

Do you know of cytotec (misoprostol)?	Frequency	%
Yes	860	5.2
No	13571	82.5
Not indicated	2014	12.2
Total	16445	100

Table 5: Use of misoprostol among respondents.

Have you ever used cytotec (misoprostol)?	Number	%
Yes	374	43.5
No	425	49.4
Not indicated	61	7.1
Total	860	100

Only 1063 (6.5%) were aware of drugs that could be used to stop bleeding following childbirth (Table 2). The most commonly mentioned names of such drugs by the women who were aware were ergometrine, misoprostol and vitamin K. About 13% of the women knew of drugs used to terminate unwanted pregnancy (Table 3). The drugs mentioned included postinor (mentioned by 41% of the respondents), duofem and misoprostol. A variety of other agents such as Andrews liver salt, ampiclox, lime and salt, antibiotics were also indicated as drugs that can be used to terminate unwanted pregnancy.

On awareness of misoprostol, 860 (5.2%) of 16445 women were aware of misoprostol (Table 4). Among those who knew and indicated its uses, two-thirds (67%) indicated that it could be used for termination of pregnancy, 13% said it could be used for regulating menstruation while 5% were aware it could stop bleeding following child birth.

Of the 860 women who were aware of misoprostol, 43.5% had used it before the survey (Table 5). Half of the respondents who used misoprostol did not indicate what it was used for. About one in 5 had used the drug to terminate an unwanted pregnancy while 16% claimed they had used it for regulating their menstrual cycle.

DISCUSSION

The 16445 women who took part in the survey were fairly evenly distributed in proportions between the designated age groups from 20 to 49 years and about half (54%) of the respondents had more than primary level of education. We found that 13% and 6.5% were aware of drugs that could be used to terminate pregnancy and stop bleeding following childbirth respectively (Table 2 and 3). Stillman et al in Lagos, Nigeria observed that 57% of women did not know about pills that could end a pregnancy before visiting a drug seller.⁹ This value reported by Stillman et al is lower than 77% found in our survey despite the fact that their study was also done in Lagos, Nigeria like ours. Our survey included a much larger number of women making our finding more likely representative of the entire population.

Only 5.2% of the respondents were aware of misoprostol, two-third (67%) of which knew it could be used to terminate pregnancy and a meagre 5% of women, aware of misoprostol, knew it could be used to reduce or stop bleeding following childbirth. The level of awareness about misoprostol in our survey is way lower than findings by Maternowska et al in Burkina Faso, who reported that

about 2/3rd of respondents in their study knew misoprostol, though unsure of its dosing or how to use it, they were aware it could be used to empty the uterus for an abortion.¹⁰ Like in our study, more women who were aware, could relate more to its use for an abortion than for its other medical uses. Also Rosing et al in New York found that 37% of respondents in their study admitted familiarity with the use of misoprostol as an abortifacient.¹¹ The discrepancy in our findings with that of Maternowska et al and Rosing et al could be explained by their relatively smaller sample size of 73 and 610 women respectively recruited from health facilities as against our community based approach.

Less than half (43.5%) of the women who were aware of misoprostol had used it at some point in time prior to this survey. This group of women accounted for 2.3% of the entire study population. In the work by Rosing et al 5% of the women reported personal use of misoprostol.¹¹ This relatively higher proportion, reported by Rosing et al when compared to our finding of 2.3% is probably because their work was in a developed country where a large proportion of the women are likely to be better placed socio-economically and education wise. A rate of 2.2%, similar to our finding, in a large Brazilian prenatal population (133/6102) was referred to in the publication by Rosing et al. This similar lower rate of personal use of misoprostol noted in Brazil may be explained by Brazil also being a low to medium-income country like Nigeria.¹¹

Half of the respondents who used misoprostol did not indicate what it was used for. This may be due to the culture of secrecy in matters relating to termination of pregnancy stemming from the current legal and socio-cultural restrictions on abortion in Nigeria. About one in 5 of the respondents who had used misoprostol indicated they had used misoprostol to terminate an unwanted pregnancy.

The limitation to this study was that not all women remembered the name of drugs they used.

CONCLUSION

In conclusion, findings from this survey suggest that adequate knowledge about the safety, life-saving and effective use of misoprostol among Nigerian women is low. There is need to disseminate information about misoprostol especially in settings where women are likely to give birth outside of a health facility or in the absence of skilled health personnel.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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