

ORIGINAL RESEARCH ARTICLE

Decision-making and social network support around ending unwanted pregnancies using misoprostol in Lagos state, Nigeria

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Abstract

Nigeria, with the largest population in Africa, has a restrictive abortion law, and a high rate of induced abortion. The objective of this study was to explore women's decision-making process for self-managed abortions and the support they received from people in their network during the abortion process. Secondary data collected by Guttmacher institute on misoprostol-containing medications to terminate a pregnancy in Lagos State was used for the study. Forty-nine percent of women visited a drug seller that they used frequently for other health problems; while 25% were referred to the drug seller by friends. Sixty-two percent of respondents reported confiding in at least one person who they trusted, from whom the majority reported receiving emotional support. Self-managed abortions are an increasingly important option for people, especially where abortion is legally restricted, and having support during the abortion process helps women manage their abortions. (*Afr J Reprod Health* 2024; 28 [3s]: 24-36).

Keywords: Induced abortion, termination, women, misoprostol, self-manage

Résumé

Le Nigeria, qui compte la plus grande population d'Afrique, a une loi restrictive sur l'avortement et un taux élevé d'avortements provoqués. L'objectif de cette étude était d'explorer le processus décisionnel des femmes concernant les avortements autogérés et le soutien qu'elles ont reçu des personnes de leur réseau pendant le processus d'avortement. Des données secondaires collectées par l'institut Guttmacher sur les médicaments contenant du misoprostol pour interrompre une grossesse dans l'État de Lagos ont été utilisées pour l'étude. Quarante-neuf pour cent des femmes ont consulté un vendeur de médicaments qu'elles utilisaient fréquemment pour d'autres problèmes de santé ; tandis que 25 % ont été recommandés au vendeur de drogue par des amis. Soixante-deux pour cent des répondants ont déclaré s'être confiés à au moins une personne en qui ils avaient confiance, et dont la majorité a déclaré avoir reçu un soutien émotionnel. Les avortements autogérés sont une option de plus en plus importante pour les gens, en particulier là où l'avortement est légalement restreint, et le fait de bénéficier d'un soutien pendant le processus d'avortement aide les femmes à gérer leur avortement. (*Afr J Reprod Health* 2024; 28 [3s]: 24-36)

Mots-clés: Avortement provoqué, interruption volontaire de grossesse, femmes, misoprostol, autogestion

Introduction

Globally, medication abortion (MA) – the use of mifepristone and misoprostol in combination or misoprostol alone for the management of abortion – has become an increasingly important method for people seeking to terminate a pregnancy¹⁻². Medication abortion plays a crucial role in providing access to safe, effective, and acceptable abortion care, especially in places where abortion is legally restricted or in resource-constrained settings.

The availability and use of medication abortion has been increasing outside of clinic settings^{3,4} and currently the World Health Organization (WHO) safe abortion guidelines state that community health workers, pharmacists, and pharmacy workers can safely and effectively provide MA for early abortion, which further increases access to care^{5,6}. Given the nature of the medication abortion process, it is also possible for individuals to manage the process by themselves, outside of a healthcare facility. In March 2023, WHO released updated guidelines including self-management of

medication abortion as a fully recommended model for abortion^{6,7}.

Existing evidence shows that MA access through pharmacies has been on the rise, likely due to their accessibility and affordability^{8,9}. In Nigeria, Patent Medicine Vendors (PMV) are important providers of misoprostol. Patent medicine stores are the preferred first source of medication, and for many types of health care overall, in the region^{10,11}. Nigeria, with the largest population in Africa, has a restrictive abortion law, permitting abortions only in situations where the woman's life is at risk¹². Nevertheless, the country has a high rate of induced abortion - estimated at 33 per 1000 women of reproductive age in 2012¹³ while in 2018, Performance Monitoring and Accountability 2020 (PMA2020) estimated 45.8 abortions per 1000 induced abortions annually among women of reproductive age^{14,15}. In 2018, a hospital-based study of women admitted for post-abortion care reported an increasing trend towards the use of MA by women as compared to other methods¹⁶.

Research from Africa, Asia, Latin America and Europe has shown that the decision-making process regarding terminating an unwanted pregnancy is complex and women's trajectories to abortion care are influenced by their individual characteristics, needs and choices, local context, and the broader national context including legal, policy and health system factors¹⁷⁻¹⁹. These decision-making pathways are likely to vary considerably between adolescents, youth, and older women.

There has been no research undertaken in Nigeria to document women's decision-making processes to self-manage abortions using misoprostol procured from drug sellers and the kind of support they get from their social networks (if any) during the process. According to previous studies, getting support can ease challenging experiences and is often linked with beneficial health outcomes²⁰⁻²¹. It has positive emotional effects, as well as health and survival benefits. The objective of this paper is to explore women's decision-making process for self-managed abortions using misoprostol procured from drug sellers, and the support they received from people in their network, in Lagos State Nigeria. The findings will provide a better understanding of the role of social support in women's self-managed

Support and termination of pregnancy using misoprostol

abortion experiences when faced with unwanted pregnancies.

Methods

Data source

Secondary data was used for the study. The data was obtained from Guttmacher Institute's conducted study on the use of misoprostol for abortion in Nigeria in 2018. More explanation on about the data can be obtain in¹ article

Context and recruitment process

This study was conducted in six Local Government Areas (LGAs) in Lagos State in 2018. The LGAs were purposively selected to include areas that were representative of urban and peri-urban sections of the state and to include LGAs that have at least one tertiary hospital and higher institution.

Mapping and screening exercises were conducted to identify the universe of drug stores (primarily pharmacies and PMVs) providing misoprostol-containing drugs in the selected LGAs. Drug sellers who reported selling misoprostol were recruited to refer women who purchased the medicine from their shops to the study. Drug sellers provided a general explanation of the study, and asked anyone interested in participating if they agreed to be contacted by a member of the study team¹. Also, written informed consents were obtained from respondents who agreed to be part of the study by the drug seller.

Interviewers contacted willing participants 1–2 days after purchase of the medicine, explained the study in detail and obtained respondents' oral informed consent to participate prior to conducting a telephone screener to determine eligibility. Only women aged 18–49 who bought misoprostol either by themselves or through proxy, specifically to terminate a pregnancy were eligible for inclusion. Eligible women were invited to participate in two additional rounds of surveys using structured questionnaires administered by telephone over approximately one month¹. The first follow-up interview was conducted 5–7 days after screening to identify the medications purchased, establish if and how the woman used the medication and ask about her interaction with the drug seller at the time of purchase. A second follow-up interview was

conducted three weeks later (one month after purchasing the medication) to understand women's self-reported health outcomes after taking the medication, how women assessed the completion of their abortions, support during the abortion process and women's willingness to recommend misoprostol to friends or use it again. Women were recruited into the study over a period of two months (April-May 2018). All women aged 18–49 who bought misoprostol either by themselves or through proxy at the pharmacies in our sample to terminate a pregnancy during the period of the study were eligible to participate. More details on the mapping, screening, recruitment, and interview can be found in a previously published article¹. All data were collected using the data collection software SurveyCTO on Android tablets.

Data and analysis

Definitions

We categorized women into two age groups: youth (ages 18 to 24) and older women (ages 25–49) for the analyses. Drawing on Cohen's Theory of Support Functions²², we classified the support that women wanted and/or received from their network into four domains:

- Emotional support: Emotional support is provided by focal individuals such as friends and family members who express sympathy, concern, care, and empathy. Our data included responses such as: "S/He gave me emotional support during the process", "Called to know how she was doing."
- Informational support: Informational support is the provision of advice, knowledge, suggestions, and tools useful to the individual. Our data included responses such as: "Gave information based on her experience", "She told me about the drug and where to get it."
- Social support: Involves spending time with others in leisure and recreational activities. Our data included responses such as: "He followed me to the clinic", "He was with me all through the day."
- Instrumental support: Instrumental support is the provision of aid, resources, money, goods, equipment, and services at a time of need. Our data included responses such as: "He took care of the children", "Took her home from the shop."

Analysis

We used descriptive, bivariate analysis to describe women's individual characteristics, their abortion-related experiences (how they became aware of the pregnancy, the intention of the pregnancy, whether or not they knew about MA prior to this pregnancy, sources of information about misoprostol for abortion, who decided to go to the drug seller they purchased from and why they decided to buy from this person); support related to the abortion (disclosure about the pregnancy termination, reasons for disclosure, support desired when telling relation or confidante, and support received from the first-mentioned confidant or only person who knew, and ability to rest whilst using the medications); and abortion outcomes (complete abortion without surgical intervention, post-abortion complications, and whether or not they would take misoprostol again or recommend it to a friend) according to level of social support received during the abortion process. All analyses were conducted using Stata14.1.

Ethical consideration

The National Health Research Ethics Committee in Nigeria and the Institutional Review Board of Guttmacher Institute approved the study. Refer to the ¹ for further details on the ethical issues relating to the study.

Results

Three hundred and forty drug sellers selling misoprostol were identified the survey, of which 227 (67%) agreed to recruit women. One hundred and forty-eight (65%) of those who agreed to recruit women did so, and 501 women accepted to be part of the study and were ultimately recruited into the study. Of these, 485 women (97%) were successfully contacted and screened, while 16 respondents (3%) were unreachable. Out of the 485 respondents, 446 were eligible for the study (92% of those screened), and 394 women (88% of all eligible women recruited) were successfully interviewed in two other follow-up interviews. Three hundred and seventy-five (95%) of all interviewed women purchased the medications by themselves while nineteen women bought them by proxy. We present data from the 394 women who completed all the interviews.

Table 1: Demographic characteristics of respondents, disaggregated by age group, Nigeria misoprostol study, 2018

	Young women (18-24)		Older women (25-49)		Total	
	N=90		N=304		N=394	
	Freq.	%	Freq.	%	Freq.	%
Level of education						
No schooling or incomplete primary	0	0.0	3	0.9	3	0.8
Primary/Junior secondary school	3	3.3	26	8.6	29	7.4
Senior secondary school	55	61.1	158	52.0	213	54.1
Some higher education +	32	35.6	117	38.5	149	37.7
P-Value	Pearson chi2(12) = 19.0145 p = 0.088					
Marital status[^]						
Currently married or cohabiting	15	16.7	182	59.9	197	50.0
Separated/divorced/widowed	0	0.0	20	6.6	20	5.1
Never married/never cohabited	75	83.3	102	33.5	177	44.9
P-Value	Pearson chi2(8) = 116.7722 p = 0.000					
Parity*[^]						
No children	37	69.8	39	22.4	76	33.5
1-2 children	14	26.4	71	40.8	85	37.4
3+ children	2	3.8	64	36.8	66	29.1
P-Value	Pearson chi2(8) = 90.0275 p = 0.000					
Employment[^]						
Work outside the home for pay	41	45.6	162	53.3	203	51.5
Family business or subsistence farm	7	7.8	88	28.9	95	24.1
Housewife	0	0.0	15	5.0	14	3.6
Student	30	33.3	22	7.2	52	13.2
Unemployed	12	13.3	17	5.6	29	7.4
P-Value	Pearson chi2(16) = 90.7765 p = 0.000					
Previous abortion attempt[^]						
Yes	7	7.8	67	22.0	74	18.8
No	83	92.2	237	88.0	320	81.2
P-Value	Pearson chi2(1) = 0.845 p = 0.0384					

*Smaller sample size than other variables because this question was not included in the initial survey and so we followed up with women via mobile phone. 227 women provided information on their parity.

[^] P value between groups <=0.05 from chi² test

Twenty-three percent of our sample were young women (ages 18-24). Although there were no significant differences in their educational levels, no young women and only two older women reported having not attended school. Young women were less likely to be in union (i.e. married or cohabiting with a man), have a child or report a previous abortion attempt, and to work on a farm or in a family business. Young women were more likely to be students and be unemployed. The results further show that 81% reported that they had not attempted abortion before (81%); older women were more likely to report having previously attempted abortion before than younger women (22% vs 8%; see Table 1).

Most women discovered their pregnancies because their menstrual period was late (64%) whilst others experienced feelings or symptoms of pregnancy (Table 2). Older women were more likely to recognize the pregnancy on account of symptoms than young women (40% vs 30%), and although not statistically significant, more younger women (49%) reported using a self-administered urine test than older women (38%). About 90% of the younger women and three-quarters of the older women interviewed had no intention of getting pregnant (77%). More than half of the respondents (57%) reported not having had any previous knowledge about MA with no significant difference by age. Among those who knew about

Table 2: Circumstances around pregnancy recognition and choosing to seek care from a drug seller, Nigeria misoprostol study, 2018

	Young women (18-24)		Older women (25-49)		Total	
	N=90		N=304		N=394	
	Freq.	%	Freq.	%	Freq.	%
Awareness of pregnancy*						
Intuitively felt pregnant	24	26.7	83	27.3	107	27.2
Experienced pregnancy symptoms (e.g., breast tenderness)^	27	30.0	120	39.5	147	37.3
Menstrual period was late	58	64.4	194	63.8	252	64.0
Blood test by medical provider	4	4.4	14	4.6	18	4.6
Urine test by medical provider	9	10.0	29	9.5	38	9.6
Ultrasound by medical provider	0	0.0	3	1.0	3	0.8
Went to lab for blood test	4	4.4	15	4.9	19	4.8
Went to lab for urine test	2	2.2	15	4.9	17	4.3
Self-administered urine test	44	48.9	116	38.2	160	40.6
P-Value	Pearson chi2(1) = 2.8738 Pr = 0.040					
Pregnancy intention						
Did not want to get pregnant	81	90.0	235	77.3	316	80.2
Wanted to get pregnant	9	10.0	67	22.0	76	19.2
Don't know	0	0.0	2	0.7	2	0.5
Previous knowledge about medication abortion pills						
Yes	37	41.1	132	43.4	169	42.9
No	53	58.9	172	56.6	225	57.1
Source of previous knowledge about medication abortion pills (169)						
Doctor	2	5.4	11	8.3	13	7.8
Nurse	1	2.7	14	10.6	15	8.8
Person who has used MA pills to terminate previously	4	10.8	22	16.7	26	15.4
Friend	20	54.1	52	39.3	72	42.6
Read about it online	6	16.2	11	8.3	17	10.1
Drug seller or Pharmacist	2	5.4	9	6.8	11	6.5
Others	2	5.4	13	9.8	15	8.8
Source of information about current MA pills (to terminate this pregnancy)						
Internet	10	11.1	27	8.8	37	9.4
Drug seller	39	43.3	140	46.1	179	45.4
Partner/Friend/Family	26	28.9	66	21.7	92	23.4
Medical provider	5	5.6	23	7.6	28	7.1
Health training	5	5.6	13	4.3	18	4.6
Intuitively understand	3	3.3	18	5.9	21	5.3
Others	2	2.2	17	5.6	19	4.8
Most trusted sources of information about current MA						
Internet	8	8.9	18	5.9	26	6.6
Drug Seller	42	46.7	151	49.7	193	49.0
Partner/friend/family	27	30.0	81	26.6	108	27.4
Medical Provider	8	8.9	33	10.9	41	10.4
Health Training	1	1.1	3	1.0	4	1.0
Intuitively understanding	3	3.3	16	5.3	19	4.8
Others	1	1.1	2	0.6	3	0.8
Whose decision was it to come to this drug seller?						
Self	68	75.6	231	76.0	299	75.9
Husband/partner	7	7.8	33	10.9	40	10.2
Mother/guardian	1	1.1	1	0.3	2	0.5
Sister/female friend	13	14.4	31	10.2	44	11.1

Husband and self, jointly	0	0.0	2	0.7	2	0.5
Clinician	1	1.1	6	1.9	7	1.8
Reason why this drug seller was chosen						
Usually patronize them for health problems	40	44.4	156	51.3	196	49.7
Close to home	8	8.9	36	11.8	44	11.2
Less expensive than other drug sellers	0	0.0	2	0.7	2	0.5
Was recommended by someone^	30	33.3	52	17.1	82	20.8
No one there knows me (confidentiality)	4	4.4	19	6.3	23	5.8
Easy access via public transport	0	0.0	2	0.7	2	0.5
This is the only drug seller I know	2	2.2	7	2.3	9	2.3
I knew they had the pills I needed	3	3.4	11	3.6	14	3.6
Others	3	3.4	19	6.3	22	5.6
P-Value	Pearson chi2(4) = 11.5098 Pr = 0.021					
Knows about other places to procure MA for abortion						
Yes	20	22.2	65	21.4	85	21.6
No	70	77.8	239	78.6	309	78.4
Would use MA pills in the future if got pregnant again						
Yes	61	67.8	214	70.4	275	69.8
No	29	32.2	90	29.6	119	30.2
Would recommend MA pills to someone						
Yes	74	82.2	260	85.5	334	84.8
No	16	17.8	44	14.5	60	15.2

*Multiple responses to these questions were possible

^ P value between groups ≤ 0.05 from chi2 test

MA, about half of the respondents had heard about misoprostol from a friend (42%) with a higher percentage of younger women than older women (54% vs 39%) hearing about it from a friend. More older women had heard about misoprostol from clinicians (18%), and people who had used the pills before (17%) than younger women, while more younger women reported reading about it online (16%, vs 8% older women).

Most women reported that their source of information about MA comes from the drug seller (45%), followed by friends and medical providers (23% and 7%, respectively) with their most trusted sources of information coming from the drug seller, irrespective of respondents' age. In both age groups, most women reported choosing to come to the drug seller by themselves (76% total). Amongst both younger and older women, the majority chose the drug seller they procured their misoprostol pills from because they usually patronize them for health problems (44% among younger women and 51% among older women). However, almost twice as many younger women chose the drug seller

because the seller was recommended by someone they knew (33%) compared with older women (17%). More than three-quarters of the women (78%) had no knowledge about other places to procure MA for abortion. Importantly, the majority of the women in both age groups reported they would self-manage an abortion again and would recommend the use of MA pills to their friends.

Table 3 presents the results on respondents' disclosure about their abortions and the availability of support from their social networks during the abortion process. Overall, 63% of the women interviewed reported that someone else knew about their self-managed abortion. Among the 63% who disclose their abortion, nearly all had made the decision to deliberately disclose their abortion to at least one confidant either by telling them directly or discussing the decision with them. Although the majority of the respondents reported that at least one person knew they had taken misoprostol to end a pregnancy, a substantial proportion in both age groups (34%) reported no one knew about their pregnancy

Table 3: Availability of support from social network during the abortion process, Nigeria misoprostol study, 2018

	Young women (18-24) N=90		Older women (25-49) N=304		Total N=394	
	Freq.	%	Freq.	%	Freq.	%
Do people knew about your self-managed MA						
Nobody knew	31	34.4	103	33.9	134	34.0
People knew	53	58.9	196	64.5	249	63.2
Don't know	6	6.7	5	1.6	11	2.8
How many people other than the drug seller knew about self-managed MA (N=249)						
One	43	81.1	160	81.6	203	81.5
Two or more	10	18.9	36	18.4	46	18.5
How relation or confidant knew about self-managed abortion (N=249)						
I told him/her	29	54.7	92	46.9	121	48.6
He/she saw the medicine	0	0.0	3	1.5	3	1.2
We discussed the decision together	23	43.4	99	50.5	122	49.0
Other (Not specified)	1	1.9	2	1.1	3	1.2
Relationship to the first mentioned or only person who knew (N=249)**^						
Husband/Partner	12	22.6	102	52.0	114	45.9
Father	0	0.0	1	0.5	1	0.4
Mother	1	1.9	5	2.6	6	2.4
Brother	0	0.0	3	1.5	3	1.2
Sister/Female relative	6	11.3	16	8.2	22	8.8
Male friend	11	20.8	16	8.2	27	10.8
Female friend	21	39.6	46	23.5	67	26.9
Health provider	2	3.8	7	3.5	9	3.6
P-Value	Pearson chi2(28) = 40.3572 p = 0.041					
Support received from person who knew **,#						
No help/support	7	9.7	34	11.4	41	11.1
Emotional support	30	41.7	112	37.6	142	38.4
Informational support	15	2.1	59	19.8	74	20.0
Social support	1	1.4	3	1.0	4	1.0
Instrumental support	19	26.4	90	30.2	109	29.5
Support desired when telling relation or confidante (N=121)						
I needed his/her help to buy the medicine	2	6.9	11	11.9	13	10.7
I needed his/her help during the termination process	4	13.8	2	2.2	6	5.0
I wanted his emotional support throughout the process	8	27.6	19	20.7	27	22.3
I needed his/her help because I experienced complication	1	3.4	1	1.1	2	1.7
I tell this person everything	12	41.4	53	57.6	65	53.7
He is responsible for the pregnancy	2	6.9	4	4.3	6	5.0
No reason	0	0.0	2	2.2	2	1.61
P-Value	Pearson chi2(24) = 37.9767 p = 0.035					
Support received from relatives or confidante who were told by respondent **,#						
No help/support	6	16.2	18	20.2	24	19.0
Emotional support	17	45.9	6	6.7	23	18.3
Informational support	4	10.8	28	31.5	32	25.4
Social support	1	2.7	0	0.0	1	0.8
Instrumental support	9	24.4	37	41.6	46	36.5
Ability to rest during the abortion process						
I needed rest, and I was able to take time off	64	71.1	198	65.1	262	66.5

I needed rest, and I was unable to take time off	5	5.6	25	8.3	30	7.6
No, I didn't need to rest	21	23.3	81	26.6	102	25.9
Activities respondent had to do during the abortion process if they needed rest**.# c						
Nothing^	34	25.8	74	13.2	108	15.6
Taking care of family needs^	25	18.9	163	29.1	188	27.1
Cleaning home^	29	22.0	133	23.7	162	23.4
Physical household labour	5	3.8	18	3.2	23	3.3
Going to school	11	8.3	19	3.4	30	4.3
Going to work (physical labour)	12	9.1	58	10.3	70	10.1
Going to work (non-physical labour)^	16	12.1	96	17.1	112	16.2
P-Value			Pearson chi2(288) = 338.3537 p = 0.022			

Multiple responses to this question were possible

**These questions were applicable in a subset of women and the sample size is indicated in parentheses

^ P value between groups <=0.05

Table 4: Summary table of women’s disclosure and abortion outcome, Nigeria miso study, 2018

		Women who had support during the abortion process* N = 249		Women who did not have support during the abortion process** N = 145		All women N = 394	
		N	%	N	%	N	%
Abortion completed without surgical intervention after 30 days		234	94	135	93	369	94
Experienced a post-abortion complication		15	6	10	7	25	6
Would take MA pills again		177	71	98	68	275	70
Would recommend MA pills to a friend		211	85	123	85	334	85

* Women who disclosed their abortion & received some type of support from confidante.

** Women who said nobody else knew about their abortion or that they did not get any help/support from the person they told.

termination; younger women were more likely to be unsure if anyone knew compared to older women (7% vs. 2%). Of the respondents who reported that at least one confidant knew about their abortion, most of the women had told the confidant by themselves about their use of misoprostol (49%), or had discussed their decision to use it with them (49%). We present data on either the only person or first person the respondent reported telling about their abortion together. The people most frequently reported as the first or only confidants were husbands and partners among older women (52%) whilst younger women were more likely to report female friends (40%). The main reason given for confiding in someone about the abortion was because they needed some kind of support. More than half (54%) disclosed their abortion because they said they told that confidante

everything; 22% reported telling that person because they wanted emotional support, and 11% needed that persons’ support in buying the medication. Older women were significantly more likely to tell their confidante about everything including their abortion process than young women (58% vs. 41%, respectively), also, young women were more likely to desire emotional support (28% vs. 21%) and help during the termination process than older women (14% vs. 2%, respectively). Over a third of women in both age groups reported receiving instrumental support (support in provision of aid, resources, money, goods, equipment, and services at a time of need) from their first/only confidant (36%), followed by informational support (support in provision of advice, knowledge, suggestions, and tools useful to the individual) in about 25% of cases, and

emotional support (support provided by focal individuals such as friends and family members who express sympathy, concern, care, and empathy) in about 18% of cases. However, there is a substantial difference in the emotional support received by younger women and older women, as the young women received more emotional support than the older women (46% vs 7% respectively), although not statistically significant.

Whilst about a quarter of women reported not needing to rest from normal activities during the abortion process, majority of those who needed rest were able to take time off with no significant differences by age. That said, amongst those who needed rest, many still had to attend to their household, schooling or personal responsibilities during their abortion process. A greater proportion of young women reported having to do nothing (25%) compared with 13% of older women. A significantly greater proportion of older women than younger women reported needing to take care of their family needs (29% older women vs. 18% youth), clean their home (24% older women vs. 22% youth) and go to work (27% older women vs. 21% youth).

Table 4 shows selected abortion outcomes according to whether or not women had support from their network during the abortion process or not. There were effectively no differences in success of the abortion, likelihood of complications, willingness to use the method again, or wiliness to recommend MA to a friend between outcomes among both women who disclosed their abortion and received some kind of support from their confidante(s) and those who experienced their abortion alone (either with nobody knowing, or not getting support from those who did know). The vast majority (93%-94%) had a complete abortion without surgical intervention; very few (6%-7%) reported experiencing a post-abortion complication; most (68%-71%) stated they would use misoprostol again if they became pregnant; and 85% stated they would recommend misoprostol to friends if a friend became pregnant with an unwanted pregnancy.

Discussion

Our study examined the decision-making pathways for women who self-managed an abortion using misoprostol procured from drug sellers, and the

support they received from people in their network in Lagos State, Nigeria. Overall, we found that the majority of the women in our study bought the medication by themselves. A previously published paper using data from our study documented the relatively high level of autonomy for abortion care-seeking behavior among our sample compared with other studies¹. More than half of respondents reported having no previous knowledge about medical abortion pills (57%). Among those who knew about MA prior to this study, 43% of them found out through their friends and family. This finding is in line with previous studies in Nigeria, Ghana, Mexico²³⁻²⁵ and a systematic review carried out in several countries in sub-Saharan Africa, Latin America, and the Caribbean²⁶ which indicated that women perceived their choices were safer if they relied on information from trusted friends²³⁻²⁶. Nonetheless, in our study, about half of the women interviewed reported that their current main source of trusted information about MA was the drug seller from whom they procured the abortion medication, highlighting the important role that drug sellers play in women's health seeking behavior, including abortion experience and the need for them to be equipped to provide accurate information about the abortion process as well as potential post-abortion care¹⁴.

One-third of our study sample did not share their abortion experience with anyone, and did not receive support from people in their lives, while 63% did disclose. A nationally representative survey conducted in Nigeria²⁷ found that 35% of all women reported disclosing their abortion to at least one confidant. This result differs from ours potentially because our study was only conducted in Lagos State which is not nationally representative, and we purposively selected areas where there were large educational institutions. The higher proportion of women who disclosed their abortion in this study could be due to the fact that the women in our sample are better educated than women in a typical population of women, and potentially more socially connected than the average 15–49-year-old in Nigeria.

In our study, patterns of disclosure were considerably different by age group. Older women who were more likely to be married reported confiding in their husband or partner whilst younger women who were likely to be unmarried reported confiding in their female friends, partners,

and male friends. The findings with regard to older women, is in line with evidence from Ghana, Kenya, Gabon, Chile, and Peru, which found that male partners were in the know of the decisions about method and source of MA used by the women^{28-31,26}. However, younger women preferred to disclose their abortion process to their female friends (40%), which is also in line with a study conducted in Ghana which reported that women tell their female friends about their self-managed abortion because most relied on friends to recommend the method or to buy the drugs for them, or simply because their friends had had an abortion before³¹. Another studies by^{32,35,26} in 2023 found that while most people involved at least one person who was supportive, involving someone who was not at all supportive of the decision to have an abortion could lead to negative outcomes such as depression, anxiety, stress, and low self-esteem³²⁻³⁶.

In this study, we found there were no differences in our measures of abortion outcomes and attitudes towards medication abortion among the group who disclosed their abortion and received support from at least one confidante, compared with those who did not. Abortion outcomes and attitudes were positive overall: nearly all women experienced a complete abortion without surgical intervention (94%), 70% stated they would use misoprostol again if they became pregnant with an unintended pregnancy and 85% stated they would recommend it to a friend. The dimensions of support that we measured was not significantly associated with the completeness of the abortion or the likelihood of getting complications. We had hypothesized that women who benefitted from their social network's advice, financial assistance, emotional and other types of support may have been better able to navigate the abortion process because they have someone else to discuss issues that arise, they may receive higher quality care because they are told where to go and given enough money to afford higher quality care. Further research is needed to better understand how the support they received impacted each stage of their abortion process. Evidence from other studies suggests that disclosing the abortion process to a supportive source, particularly an intimate partner or friends, may reduce the risk of complications and adverse mental health outcomes while disclosing to an unsupportive source may increase

this risk²². In our study, very few women (6%) experienced any health complications overall, and there were no differences by level of support.

Most of the women who disclosed their MA process reportedly did so because they told this confidante everything and abortion was no exception. Others reported telling someone because they wanted their emotional support or assistance in getting the medication; in some cases, the confidante was the person who recommended the medication to them or had used the medication before and had knowledge about how it works. Although more than half of the women in both age groups confided in people about their abortions (63%), a substantial proportion (34%) reported that nobody else knew about their abortions. This shows that the ability of women to self-manage their abortion without anyone else knowing- if that is what they choose to do- is important. However, while our study assessed the reasons why people disclosed their abortions and what types of support they wanted and received, we did not ask detailed questions about what the abortion experience was like for women who reported that they went through their abortions alone. Further research is needed to understand whether this was an empowering choice for women, or if they did not have anyone to confide in, or perhaps they wanted to share their abortion experiences but were uncomfortable doing so due to stigma or some other reason.

Areas for future research include that as our data were quantitative, with close-ended responses that did not provide details, in-depth qualitative research on this topic is necessary to better understand the social dynamics that come into play for women who have abortions and disclose their abortions to other people. Qualitative research is also needed to expand the evidence on women's experiences in obtaining and using misoprostol in the community and to help inform the development of approaches and mechanisms to facilitate optimal outcomes for those using this method.

Limitations

This study has some limitations, the primary one being that our study was unable to assess the consequences of desiring a certain type of support, but not getting it and how that may have impacted

women's abortion experiences. In addition, our sample only included women who were recruited by drug sellers who were willing to state that they sell misoprostol and then agreed to participate in recruiting women, and who may have had different sales practices from those who did not state that they sell or agree to recruit women.

Recommendations and Conclusion

To our knowledge, this is the first prospective study examining the decision-making process and support available within women's social networks for self-managing abortions with misoprostol obtained from drug sellers in sub-Saharan Africa. Understanding social support and its role in decision-making pathways for abortions are complicated, particularly in restrictive contexts, and understanding how women choose to obtain misoprostol for self-management may be connected to their abortion experiences and outcomes. Our results suggest that most women decided on their own to self-manage their abortions and chose the source of their misoprostol themselves. It is possible that women who seek out misoprostol have greater agency within their context, or that the confidentiality associated with using misoprostol allows more women to decide for themselves how to manage an unintended pregnancy safely. Also, the internet was an important source of information about the pills, and younger women relied more on the recommendations of their friends to choose drug sellers.

Self-managed abortions are an increasingly important option for people, especially where abortion is legally restricted. More research is needed to expand the evidence on women's experiences in obtaining and using misoprostol in the community and to help inform the development of approaches and mechanisms to facilitate optimal outcomes for those using this method. Finding ways to disseminate clear and accurate information on safe abortions, and misoprostol pills at the community level is critical to increase knowledge of and access to safe services and how to optimally use misoprostol as advocated for by WHO guidelines. Facilitating interventions to reduce community-level stigma of abortions and their outcomes is critical to ensuring that women can rely on their communities and

Support and termination of pregnancy using misoprostol

networks to support them when they need to obtain abortions and effectively manage the abortion process.

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Conflict of interests

The authors have not declared any conflict of interest.

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Contribution of authors

Owolabi Onikepe, Bankole Akinrinola, Ann M. Moore, Akanni Akinyemi, Adesegun Fatusi, Temitope Erinfolami conceived and designed the study. Melissa Stillman, Owolabi Onikepe, Bankole Akinrinola, Ann M. Moore, Akanni Akinyemi, Adesegun Fatusi, Temitope Erinfolami and Grace Kumolu collected and analysed the data. Grace Kumolu, Melissa Stillman and Owolabi Onikepe prepared the manuscript. All authors mentioned in the article approved the manuscript.

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