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Perceptions of access to long-acting reversible contraception removal among women in Burkina Faso☆,☆☆

Natasha A. Sokol [a,b,*], Nathalie Sawadogo [c], Brooke W. Bullington [d,e], Katherine Tumlinson [e,f], Ana Langer [g], Abdramane Soura [c], Pascal Zabre [h], Ali Sie [h], Janet A. Johnson [b], Leigh Senderowicz [g,i,j]

[a] Department of Psychiatry and Human Behavior, Warren Alpert Medical School, Brown University, Providence, Rhode Island, United States
[b] Center for Behavioral and Preventive Medicine, The Miriam Hospital, Providence, Rhode Island, United States
[c] Institut Supérieur des Sciences de la Population, Université Joseph KI-ZERBO, Ouagadougou, Burkina Faso
[d] Department of Epidemiology, University of North Carolina Gillings School of Global Public Health, Chapel Hill, North Carolina, United States
[e] Carolina Population Center, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, United States
[f] Department of Health Policy and Management, University of North Carolina Gillings School of Global Public Health, Chapel Hill, North Carolina, United States
[g] Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Boston, Massachusetts, United States
[h] Centre de Recherche en Santé de Nouna, Nouna, Burkina Faso
[i] Department of Gender and Women's Studies, University of Wisconsin-Madison, Madison, Wisconsin, United States
[j] Department of Obstetrics and Gynecology, University of Wisconsin-Madison, Madison, Wisconsin, United States

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ABSTRACT

Objectives: Long-acting reversible contraception (LARC) initiation has been well-studied and intervened upon. Because LARC requires provider intervention for initiation and removal, it is critical to measure informed choice at the time of desired discontinuation as well. We examined perceptions of access to LARC discontinuation among women at two sites in Burkina Faso, where LARC is the dominant method in the contraceptive mix.
Study design: We analyzed data from a 2017–2018 population-based, cross-sectional survey of 281 implant users and 55 intrauterine device users at two sites in Burkina Faso. We measured perceptions of access to LARC discontinuation through survey items assessing whether participants (1) were informed on how to discontinue the method, (2) believed they could have LARC removed without a lot of difficulty, (3) believed cost would be a barrier to discontinuation, (4) had ever attempted to have a provider remove LARC, and (5) successfully had LARC removed. The distribution of these measures was examined in the population and for differences by gravida, parity, domestic partnership, fertility desires, and recency of last childbirth.
Results: Thirty-eight (11%) of current LARC users reported that they were not informed on how to discontinue, 56 (17%) believed having their device removed would be difficult, and 54 (16%) believed cost would be a barrier to removal. Of women who attempted removal, providers did not immediately remove LARC on request for 10 (28%).
Conclusions: Findings indicate that LARC uptake is an insufficient measure of reproductive access or choice. Future studies should include patient-centered measures that span the full duration of contraceptive use.
Implications: This paper finds that a sizable proportion of LARC users lack information about method discontinuation and perceive or experience barriers to method removal. These findings call for a reconsideration of free and informed contraceptive choice to include the entire duration of contraceptive use, not only the time of method provision.

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* Corresponding author.
E-mail address: natasha_sokol@brown.edu (N.A. Sokol).

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1. Introduction

Access to contraception is critical to contraceptive autonomy and reproductive rights, which are pillars of global public health and human rights [1]. Long-acting reversible contraception (LARC) is a highly effective class of contraception [2–4], and increasing uptake is a popular goal for reproductive health programs worldwide [3,5–7]. While ensuring LARC access is a critical public health goal, the field of global contraceptive access has focused considerable attention on LARC uptake while neglecting to ensure free and unfettered access to LARC removal [8–14].

It is essential that all contraceptive counseling be grounded in informed choice, and medical support of LARC use is particularly complicated since provider intervention is necessary not only for initiation but also for discontinuation. It is therefore important to conceptualize contraceptive autonomy as salient not only at the time of contraceptive initiation but across the entire span of method use and particularly at the time of desired method removal.

The provision of accurate, unbiased information on LARC removal at the time of contraceptive counseling is especially crucial, given recent studies describing patient experiences of directive counseling (including the disparagement of non-LARC methods) [15], the exclusion of non-LARC methods from method options presented [16], and pressure from health care providers to adopt LARC [16–18]. While a quick return to fertility is often touted as a benefit of LARC, and this feature drives its popularity and acceptability among patients and providers [19–21], this benefit is lost when users are underinformed about removal or face barriers to discontinuation on request.

Though barriers to LARC initiation have been well-studied and many interventions have aimed to increase uptake [2,3,5,7,22,23], there is a less information on people's access to and information on discontinuation. Prior research in the Global South has suggested provider behaviors create significant barriers to LARC removal, including neglecting to counsel on removal at the time of insertion and refusing to perform requested removals [10]. Recent qualitative studies from three African countries have found that providers gatekeep LARC discontinuation, adjudicating which removal requests are and are not sufficiently legitimate to be granted [24–26].

Some studies suggest that LARC users exercise more informed choice than those using short-acting methods. A recent study using Performance Monitoring for Action (PMA) data from six African countries found that LARC users were more likely to have received counseling consistent with informed choice at method initiation, as measured by the Method Information Index+ (MII+). However, the authors of that study cautioned that the MII+ may not be measuring key dimensions of informed choice, expressing concern that MII+ does not assess informed choice around discontinuation [12]. Another study recently described lower contraceptive counseling quality among providers trained to counsel on and administer postpartum intrauterine devices (IUDs) and a reduction in the number of contraceptive methods on which these providers discussed with patients [27]. Other recent work has begun to explore facility-level barriers, finding that the lack of key supplies (and, to a lesser extent, the absence of trained providers) can pose substantial barriers to LARC discontinuation [28].

Understanding barriers to LARC removal is of particular importance in Burkina Faso, where use prevalence is high [29]. In particular, the implant alone comprises around 43% of the contraceptive mix [30]. Many Burkinabe people of reproductive age are shifting from injectables to implants [31], and donors and government subsidies have made this method available at very low or no cost [32]. While implant use has remained fairly steady in recent years, unsuccessful removal has declined dramatically [30]. This is a positive change and may reflect a "catching up" of health systems and providers following the sudden and rapid switch from injectables to implants in the country. However, given high rates of use, it remains critical to assess potential barriers that affect even smaller proportions of users, as they may translate into tens of thousands of people.

In this paper, we contribute to the emerging body of literature on LARC removal, focusing on informed choice on discontinuation at the time of method adoption and on perceived and experienced barriers to desired discontinuation of the implant and IUD. Using data from a population-based cross-sectional survey of women in two sites in Burkina Faso, we describe perceptions of access and barriers to implant and IUD discontinuation, as well as experiences with removal attempts.

2. Methods

We analyzed data collected from the quantitative portion of the Contraceptive Autonomy Study, a population-based, cross-sectional survey of women conducted in two sites in Burkina Faso from 2017 to 2018. The goal of the parent study was to develop novel indicators of family planning and contraceptive choice. The survey included both conventional family planning items and novel items focused on respondents' knowledge and experiences with and perceptions of contraception.

2.1. Sample and data collection

This cross-sectional survey was conducted through the Nouna and Ouagadougou Health and Demographic Surveillance Systems (HDSS). The Ouagadougou HDSS includes five neighborhoods in northern Ouagadougou, and the Nouna HDSS contains Nouna (a small administrative town) and 58 surrounding villages. The two sites allowed for a sociodemographically diverse sample that included respondents from rural areas, urban neighborhoods, and peri-urban slums.

Eligible participants lived within the catchment areas and were women aged between 15 to 49 years who were able to provide informed consent in French, Dioula, or Mooré. Women were randomly selected within the catchment areas (using the annual 2017 HDSS as a sampling frame), with oversampling in the Nouna sites due to the overall lower rates of contraceptive use. The survey was conducted orally in French, Dioula, or Mooré, and all interviewers spoke French and the language in which the survey was conducted, if different. Because Dioula and Mooré are not written languages, interviewer prompts and the data recording tools were written in French, and supplemental trainings were given to interviewers conducting the survey in Dioula or Mooré to standardize oral translation. Specifics of these and other survey methods are described in detail elsewhere [33].

All analyses presented here use sampling weights, and more detailed information about the sampling approach and use of survey weights can be found in Senderowicz et al., 2023 [33]. Trained interviewers conducted the survey orally in women's homes and recorded data on Android tablets.

For purposes of this analysis, we limit the sample to only the participants who reported the current use of either the implant or the IUD at the time of the survey.

2.2. Measures

Participants who currently used implants or IUDs were asked the following questions about their perceptions surrounding device removal: (1) When you procured [method], were you informed about how to stop using the method? (Binary, yes/no); (2) Do you think you could get your method removed without a lot of difficulty if you wanted? (Binary, yes/no); and (3) Do you think that the cost of getting your method removed would be a barrier if you wanted to stop using the method? (Binary, yes/no). We categorized a participant as having

any perceived barrier to removal if they responded "yes" to any of these three questions.

Furthermore, participants were asked the following questions about their actual experiences with implant and IUD removal: (1) Have you ever attempted to get [method] removed by a provider? (Binary, yes/no); and (2) [If you have attempted to get your method removed by a provider] What was the result of this attempt? (Categorical, 1 = the provider removed it when I first asked; 2 = the provider refused to remove it at first, but then agreed when I insisted; 3 = The provider refused to remove it and I went home with [implant or IUD] still in my body; and, 4 = Other).

We assessed the distributions of the five participant characteristics associated with fertility, family composition, and family plans between those who reported any perceived barrier to implant or IUD removal and those who did not. These characteristics include (1) Gravida (binary, ≤3, >3); (2) parity (binary, ≤3, >3); (3) lives with male partner (binary, yes/no); (4) wants another child (binary, yes/no); and, (5) recency of last child birth (categorical, 1 = less than 6 months ago; 2 = more than 6 months but less than 1 year ago; 3 = more than 1 year but less than 2 years ago; 4 = two or more years ago). We used z-tests and χ^2 tests to generate *p*-values for continuous and categorical variables, respectively.

2.3. Ethics approval

Research was reviewed and approved by three separate institutions: (1) the Institutional Review Board of the Office of Human Research Administration at the Harvard T.H. Chan School of Public Health in Boston, MA, USA; (2) Le Comité d'Ethique pour la recherche en santé du Ministère de la santé du Burkina Faso in Ouagadougou, Burkina Faso; and (3) Le Comité d'Ethique du Centre de Recherche en Santeé de Nouna in Nouna, Burkina Faso. Written informed consent was obtained for all adult participants, including consent to publish research findings.

3. Results

A total of 281 implant users and 55 IUD users were selected from a group of 3939 reproductive-aged women surveyed (1210 current contraceptive users) included in this analysis (Table 1). Implant users (*n* = 281) made up 7% of reproductive-aged women surveyed and 23% of current contraceptive users. IUD users (*n* = 55) made up 1% of reproductive-aged women surveyed and 5% of current contraceptive users. The majority of implant and IUD users reported currently living with their partner (84% and 87%, respectively) and desiring another child (75% and 73%, respectively).

Table 2 reports perceived and experienced barriers to removal by product type. A greater proportion of implant users compared to IUD users reported not being told about how to discontinue their method. A higher proportion of IUD users reported that they would face barriers to removal compared to implant users, although this difference was not statistically significant. Approximately equal proportions of implant and IUD users reported that cost would be a barrier to removal. Overall, 36% of implant users and 29% of IUD users reported that either they were not informed about how to stop using their method, they would face difficulty getting their method removed, or that cost would be a barrier to removal.

Eleven percent of the sample (*n* = 36) of ever implant or IUD users reported that they had previously attempted to have their method removed. A higher proportion of IUD users reported previously seeking removal compared to implant users. Among IUD users who attempted to have their method removed, 100% reported that their device was immediately removed. Among implant users who attempted to have their method removed, 37% of implant users reported that their method was not immediately removed by a provider upon their request.

Table 1
Sociodemographic characteristics of implant and IUD users, Burkina Faso, 2017–2018

Sociodemographic characteristics	Implant users (*n* = 281)	IUD users (*n* = 55)
Age, mean (SD)	30.03 (8.09)	28.11 (6.19)
Gravida >3, *n* (%)	140 (50)	21 (38)
Parity >3, *n* (%)	120 (43)	20 (36)
Lives with partner, *n* (%)	236 (84)	48 (87)
Wants another child, *n* (%)	212 (75)	40 (73)
Last birth, *n* (%)		
Never had a birth	13 (5)	2 (4)
≤ 6 mo ago	14 (5)	6 (11)
≤ 1 y ago	35 (12)	7 (13)
≤ 2 y ago	85 (30)	24 (44)
> 2 y ago	131 (47)	16 (29)
Missing	3 (1)	0 (0)

IUD, intrauterine device.

There were no associations between participant characteristics, including gravida, parity, living with partner, desire for another child, and time since last birth, and perceived barriers to method removal among IUD (Supplementary Table 1) or implant users (Supplementary Table 2).

4. Discussion

This study indicated that both perceived and experienced barriers to IUD and implant discontinuation are prevalent in this context, presenting obstacles to free and informed reproductive choice. More than one-third of IUD and implant users in this study reported perceived barriers to device removal. These barriers included lack of information about removal, perceived difficulty seeking removal, and cost. Additionally, more than one-third of implant users who previously sought removal reported experiencing a barrier to removal. Patient characteristics did not appear correlated with facing barriers to the removal of either method, suggesting individual provider beliefs or behaviors rather than user attributes may underpin barriers. Although a great deal of work has focused on promoting and measuring knowledge, attitudes, beliefs, and behaviors (by patients and providers) surrounding LARC initiation, this work has often failed to consider these factors, as they relate to discontinuation, another critical decision point.

High rates of implant use in Burkina Faso provide critical context for the importance of these findings. Almost 40% of the people in this study who had ever attempted implant removal reported experiencing some form of pushback on their request from their provider. This high rate may be in part a historical relic, representing the rapid uptake of implant use in Burkina Faso, which was not initially proportionately coupled with sufficient provider training on removal. However, reports of facing barriers to removal, including not being informed on how to discontinue use, were highly prevalent among current users of both IUDs and implants. Given the popularity of the implant as a contraceptive method, these findings indicate that contraceptive autonomy is compromised for enormous numbers of people of reproductive age in Burkina Faso.

A few studies have sought to address discontinuation with similar findings. In Ghana, researchers found that ~10% of respondents were not told about where to get their method removed, and nearly 40% of public sector clients were unable to have implants removed on their first attempt [10]. In Senegal, researchers found between 15% and 18% of LARC users were not informed about anywhere they could remove their method, and that 43% of implant and 33% of IUD users did not have their method removed on their first attempt [34].

Several other studies in various settings have found that provider refusal to remove LARC is common [10,24–26,34]. Qualitative studies have indicated that providers often counsel on removal using coercive fearmongering around false or unlikely outcomes, rather than

Table 2
Counseling around and experiences with LARC removal among implant and IUD users, Burkina Faso, 2017–2018

LARC experiences	Implant users		IUD users		*p*-value[a]
	n = 281		*n = 55*		
	n	(%)	*n*	(%)	
Not informed about how to stop using LARC	36	(13)	2	(4)	0.03
Did not think they could get LARC removed without difficulty	43	(15)	13	(24)	0.15
Cost would be barrier to LARC removal	48	(17)	6	(11)	0.17
Any barrier to removal	100	(36)	16	(29)	0.28
Has attempted to have LARC removed	27	(10)	9	(16)	0.14
Provider response to LARC removal attempt					0.12
Removed when asked	17	(63)	9	(100)	
Initially refused, then agreed	0	(0)	0	(0)	
Refused to remove	3	(11)	0	(0)	
Other	7	(26)	0	(0)	

IUD, intrauterine device; LARC, long-acting reversible contraception.
[a] *p*-value testing difference in proportion between implant and IUD users.

Table 3
Comparison of characteristics between implant and IUD users who did and did not report perceived barriers to LARC removal, Burkina Faso, 2017–2018

Sociodemographic characteristics	Did not report any perceived barrier to LARC removal (*n* = 220)		Reported a perceived barrier to LARC removal (*n* = 116)		*p*-value
	n	%	*n*	%	
Gravida > 3	110	50	51	44	0.31
Parity > 3	94	43	46	40	0.66
Lives with partner	188	85	95	83	0.62
Wants another child	168	76	85	75	0.64
Last birth					0.89
Never had a birth	8	4	7	6	
≤ 6 mo ago	12	5	7	6	
≤ 1 y ago	28	13	14	12	
≤ 2 y ago	74	34	35	30	
> 2 y ago	96	44	51	44	
Missing	2	1	2	2	

IUD, intrauterine device; LARC, long-acting reversible contraception.

outright refusing the request [24–26]. This indicates the need for enhanced provider and patient education on LARC removal risks.

Given the power differential between patients and providers, particularly in lower resource settings, it is clear that changing provider behavior is critically important. Interventions focusing on increasing provider communication around removal, educating providers on their roles as stewards of reproductive freedom and human rights, correcting false perceptions around LARC, and challenging provider beliefs about their role as gatekeepers for LARC removal may have an important impact on free and informed reproductive choice. Quotas associated with family planning provision may additionally incentivize or pressure providers to insert LARC rather than assess patient needs and desires, leading to coercive or undesired behavior. Removing quotas may encourage provider behavior that prioritizes patient desire. Conducting more specific research on provider knowledge, attitudes, beliefs, and behaviors surrounding all aspects of LARC is an important next step for developing these interventions.

Providers should conceptualize the desire for LARC as an ongoing process and not a one-off decision made at the time of method adoption. Free and informed choice requires patient-centered counseling for initiation and discontinuation. The growing body of research on LARC discontinuation points to the removal process as an important inflection point for reproductive choice. This underscores the necessity for all studies and interventions on LARC to include measures that assess reproductive choice at both time points and in between. It is critical that future studies of LARC and all contraceptive methods evaluate not only uptake but also patient-centered measures around desire and satisfaction, as well as provider knowledge, attitudes, beliefs, and behaviors that help understand whether LARC use is a free and informed choice. In particular, it is critical that evaluations of LARC-focused interventions, which often define success by measuring percent counseled or percent uptake, include these types of measures to ensure that the interventions themselves are increasing rather than compromising reproductive autonomy.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.contraception.2023.110302.

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