

Unwanted Family Planning Including Unwanted Sterilization: Preliminary Prevalence Estimates for India

Abstract

Estimates of unwanted family planning (UFP), which are based on a desire to have a child in the next nine months among current contraceptive users, exclude women who are sterilized since these women are not asked about their fertility preferences; all sterilized women are assumed to have a “met need” for family planning. However, the India National Family Health Survey asks sterilized women if they regret being sterilized and whether they were told that the operation would result in their permanent inability to have children. We extend the concept of UFP by classifying sterilized women who express regret or who were not informed about the procedure’s permanence, as having UFP. When limiting our analysis of UFP to non-sterilized contraceptive users, we find that 0.9 percent of Indian women had UFP in 2019-2021. In this period, 29.9 percent of Indian women were sterilized. We estimate that 4.9 percent of sterilized women express regret and 16.3 percent were not told of the procedure’s permanence. Adding sterilized women who express regret raises our UFP estimate in India to 2.3 percent, while also including sterilized women who were not told about the procedure’s permanence yields an overall UFP estimate of 6.9 percent in India.

Introduction

Female sterilization is the most widely used method of contraception in the world (1–3). In India, two out of every three married women of reproductive age use a method of contraception, and 37.9 percent of Indian women who use a method are sterilized (4). As a permanent method of contraception¹, female sterilization has conferred a range of benefits to many women and couples in India as well as globally and has been recognized for its effectiveness at preventing pregnancy relative to other contraceptive methods. However, the method has a deeply problematic history, whereby its provision has been linked to incidences of coercion, violations of contraceptive autonomy, lack of informed choice, and curtailed reproductive decision-making (5–11). In India, forced sterilizations and sterilization targets were a central policy of the country’s fifth Five-Year Development Plan that was implemented by Indira Gandhi, India’s prime minister who declared a national “Emergency” that suspended civil liberties between 1975 and 1977. During this time, the Indian government set a national sterilization target that was almost twice as large as targets that were set in earlier five-year plans (12,13).

In recognizing the tumultuous history of forced sterilization and coercive family planning programs, more generally, in India and around the world, the global family planning community made a commitment during the 1994 International Conference on Population and Development (ICPD) in Cairo to end target-driven policies and recognize voluntary family planning as a fundamental human right (14). A key tenet of the rights-based approach to sexual and reproductive health is for individuals to have a “full, free, and informed” choice over their contraceptive use and non-use (15), and central to this tenet is the notion that programs and providers identify, understand, and respect individuals’ preferences for contraception. While the consensus in the field has been that most family planning programs today are voluntary (16), several studies have suggested that some current contraceptive use may still be unwanted, either due to coercion or for other reasons (17–21). Given the lack of data on coercion, the standard approach is to define all women using contraception, including victims of forced sterilization, as having a “met need” for contraception.

In a recent study (22), henceforth referred to as CK2023, we proposed an approach for estimating unwanted family planning (UFP) using existing data based on the use of contraception by women who wanted to have a child within 9 months. This definition of UFP parallels the definition of unmet need for family planning that is based on women who are not using contraception but want to either limit or space births for at least two years (23). UFP does not match precisely the concept of a lack “full, free, and informed” choice of contraceptive use, but it is measurable with existing data for contraceptive users who are not sterilized and indicates that contraceptive use may be unwanted in relation to desired fertility. We argued that there should be follow-up questions when UFP is observed in future surveys to understand the reasons behind it.

If we had data on fertility preferences for sterilized women, we could estimate UFP for this group in the same way as we do for users of other contraceptive methods. However, current Demographic and Health Surveys (DHS) do not ask sterilized women about their fertility preferences, and CK2023 counted sterilized women as having “potentially wanted” family planning. This uncertainty about

¹ Although sterilization can be reversed, it is a costly procedure that comes with significant risks and uncertainty as to whether women can get pregnant again; for these and other related reasons, it is considered to be a permanent method of contraception.

wantedness is particularly an issue in India, where 29.9 percent of women of reproductive age report being sterilized in the latest National Family Health Survey (NFHS) 2019-21 (4).

Unlike other DHS surveys, the NFHS does ask sterilized women if they regret their sterilization and if they were not aware that the procedure would make them unable to have children. In this study, we use this information on women’s sterilization experiences from the latest NFHS to extend the definition of UFP to include sterilized women who express regret or who were not informed about the permanence of the method. In taking this approach, we recognize that regretting having been sterilized may be compatible with a current preference for more children but also with having wanted more children in the past after being sterilized, but not currently wanting more children. By the same token, not having been told of the fertility effects of sterilization when being sterilized may be compatible with wanting more children as well as with not wanting more children. However, it is a clear violation of a “full, free, and informed” choice, and counting it as part of met need for family planning seems unwarranted. Due to these uncertainties around our classification and limitations in measurement, we denote our results to be preliminary estimates of sterilization-adjusted UFP.

Although our extension of UFP to include sterilized women presents difficulties in its interpretation, we think that this initial approach is the best we can likely do with existing data, and we look forward to collecting direct measures of fertility preferences from sterilized women in the future. More broadly, we would encourage the development of a more specific rights-based measure that directly infers the concordance of contraceptive (non-)use with women’s “full, free, and informed” choice.

Methods

Measuring Unwanted Family Planning: The CK2023 Approach

The CK2023 approach (22) defined UFP as follows:

UFP

$$= \frac{\text{Married (or in a union), sexually active, fecund, women aged 15-49 currently using contraception who want another child within 9 months}}{\text{Married (or in a union), sexually active, fecund, women aged 15-49}}$$

Moreover, the denominator for UFP, which captures the population of women who would be at risk of pregnancy, is the same denominator that is used for the calculating unmet need, thereby allowing for direct comparisons between the two prevalence measures (24).

In CK2023, we estimated the UFP prevalence for 56 low- and middle-income countries using Demographic and Health Survey (DHS) data collected from 1,546,987 women between 2011 and 2019. As part of this exercise, we found that the UFP prevalence in our sample of women was 2.1 percent, with country-specific prevalence estimates ranging from 0.4 percent in Gambia to 7.1 percent in Jordan. We also calculated the method mix among women with UFP and found that most women with UFP were using short-acting modern methods, particularly condoms, with lower UFP prevalence among traditional method and long-acting method users.

Adjusting UFP for Unwanted Sterilization

In the CK2023 study, we noted that wantedness of family planning use in most DHS data is unknown for women who are sterilized since they are not asked about their fertility preferences. Given the

uncertainty in defining wantedness for this group, we took a conservative stance by assigning women in this group to have potentially wanted family planning.

While we do not know the fertility preferences of sterilized women in most DHS surveys, the National Family Health Survey (NFHS) of India asks sterilized women if they regret being sterilized and if they were informed about the method's permanence prior to being sterilized. In this study, we use data from the latest NFHS to adjust our estimates of UFP in India for unwanted sterilization, classifying women who regret being sterilized, or who were not informed of its permanence, as having UFP. We first present the UFP prevalence using the originally proposed CK2023 approach (the "unadjusted" approach) that is estimated only for women who are using methods other than sterilization. We then estimate a sterilization-adjusted UFP prevalence, where women who express regret over being sterilized are now classified to have UFP. Finally, we further expand our definition of sterilization-adjusted UFP by assigning women who express regret over being sterilized or who report that they were not counseled on the procedure's permanence beforehand (indicating a potential lack of informed choice) to have UFP.

In proposing these adjusted UFP prevalence estimates, we acknowledge that the concept of UFP for sterilized women is difficult to measure with current data. If we had measures of fertility preferences, we could define UFP for sterilized women consistently with our approach for other contraceptive methods. For women who express regret, the link to inferring her current fertility preferences is unclear. For example, an older sterilized woman may not want any (more) children now (at the time of interview) but may have wanted (more) children when she was younger at the time when she was sterilized, and therefore may continue to harbor feelings of regret over her sterilization. Based on her current fertility preferences, a case could be made for saying that her current contraceptive use (sterilization) is wanted, given her current fertility preferences, despite being regretted.

By the same token, although we have information on whether a sterilized woman was told by a health provider that the operation would result in her permanent inability to have children, it might again be the case that the woman's sterilization is consistent with her current fertility preferences even if she was not told of its effects on her ability to have children prior to receiving the procedure. If she does not regret the sterilization, then it could be argued that her method use is currently "wanted" despite the lack of informed consent.

For women using reversible contraceptive methods our definition of UFP is based on lack of concordance of their fertility desires with their contraceptive use. For women who have been sterilized we do not have information on fertility desires, but we can use regret or a lack of information on the consequences of the procedure as proxies for a lack of concordance. Regret may be a stronger indicator for wanting more children, and we therefore present two adjusted UFP prevalence estimates that adjust for potentially unwanted sterilizations separately by type as well as jointly. Unfortunately, we do not have more complete information on the issue of unwanted sterilizations and are limited by the few follow-up questions that were asked of sterilized women in the NFHS surveys. As in CK2023, we emphasize that our preliminary approach to estimating the prevalence of UFP is based on existing data, and we recommend that future surveys administer follow-up questions to all women who are using contraception, including sterilization, to ascertain why they are doing so and if their contraceptive use is wanted.

Data

We use data from the most recent NFHS that was conducted from 2019-2021 in India, resulting in an analytic sample of 724,115 women aged 15 to 49; we also present findings from the previous two waves of the NFHS (from 2005-2006 and 2015-2016, respectively) in the appendix for comparison (4,25,26). We use survey sampling weights to make our prevalence estimates representative of the Indian population.

An advantage of the NFHS over DHS conducted surveys in other countries is that women who are sterilized are asked additional questions related to their sterilization. The table below presents the specific NFHS-5 questions that were asked of sterilized women.

Variable	Question
Q333: Informed about sterilization permanence	Before your sterilization operation, were you told by a healthcare provider that you would not be able to have any (more) children because of the operation? 1. Yes 2. No
Q338: Regret sterilization	Do you regret that you had the sterilization? 1. Yes 2. No

We use the responses from Q338 to calculate our first variant of our sterilization-adjusted UFP, where we classify those women who express regret over their sterilization as having UFP; these women are added to the UFP numerator. On the other hand, sterilized women who do not regret their sterilization are classified as having wanted family planning. Finally, we estimate a second variant of sterilization-adjusted UFP by assigning those women who express regret over their sterilization (a response of 1 to Q338) as well as those women who report not being informed that sterilization would result in their permanent inability to have children (a response of 2 to Q333) as having UFP. Sterilized women who do regret their sterilization and who were informed about the permanence of their sterilization are classified as having wanted family planning.

Results

Table 1 replicates the CK2023 approach to calculating unmet need, UFP, contraceptive prevalence, as well as the proportion of women who exhibit concordance (alignment) between their contraceptive use and fertility preferences with the 2019-21 NFHS data. When calculating concordance, we distinguish between: a) concordant use (wanted contraceptive prevalence), which is estimated as the proportion of women who are using contraception and who report having a preference to limit or space births by at least two years; and b) concordant non-use, the alignment between women's non-use of contraception and their fertility preferences to want a child within the next two years. Approximately 0.9 percent of Indian women are estimated to have UFP, while 9.4 percent of Indian women are estimated to have an unmet need for family planning. Table 2 shows that almost 3 in 10 women in India (29.9 percent) are sterilized, and the prevalence of sterilization has remained relatively stable over time (Appendix Table 2). Table 3 shows that an estimated 4.9 percent of sterilized women in 2019-2021 reported feeling regret over their sterilization. In addition, slightly less than one-sixth of sterilized women (16.3 percent) in 2019-2021 reported not knowing about the effects of sterilization.

Table 4 presents the cross-tabulation of recorded responses related to sterilized women’s experiences with their sterilization. While the proportion of women who either regret sterilization or report not being informed about the procedure’s permanence has declined over time, we observe that a significant proportion of sterilized women in the latest NFHS either express regret (4.3 percent) or report that they were not informed about the fertility consequences of sterilization (15.8 percent) or both (0.6 percent). Moreover, a larger proportion of sterilized women who were informed about the permanence of their sterilization expressed regret over their sterilization compared to sterilized women who were not informed about the permanence of their sterilization.

National estimates of UFP and sterilization-adjusted UFP are presented in Table 5, and state-specific estimates of UFP and sterilization-adjusted UFP are presented in Table 6. Column 1 of Table 5 estimates a national UFP prevalence of 0.9 percent in 2019-2021 when calculated using the unadjusted CK2023 approach. This estimated proportion increases to 2.3 percent when we classify sterilized women who express regret over their sterilization as having UFP (Column 2, Table 5). When we expand our sterilization-adjusted UFP definition further to include both sterilized women who express regret as well as sterilized women who report not being informed about the permanence of sterilization, we estimate a sterilization-adjusted UFP prevalence of 6.9 percent in our sample. Our disaggregated estimates in Table 6 highlight considerable variation in UFP, ranging from almost 0 percent in Andhra Pradesh to 4.5 percent in Lakshwadeep, as well as sterilization-adjusted UFP across states, ranging from 2.1 percent in Meghalaya to 16.5 percent in Andhra Pradesh.

Discussion

Using data from the most recent round of the NFHS, we estimate variants of UFP as calculated in Canning and Karra (2023) using data on sterilized women’s experiences with and perceptions of their sterilization. Specifically, we reclassify those women who report that they regret being sterilized and those women who report that they were not told that sterilization would result in their permanent inability to have children as having UFP. We then re-estimate the prevalence of UFP under these alternative classifications.

Under our most expansive classification, we find that roughly 6.9 percent of Indian women in 2019-2021 would be identified to have UFP if available data on sterilized women’s experiences with and perceptions about their sterilization are used to refine measurement of the indicator. This finding has a number of implications. First, we note that our estimates for sterilization-adjusted UFP are higher (by more than seven times in 2019-2021) than the UFP estimates that we derived using the original CK2023 approach. This finding reinforces our earlier recommendation to conduct follow ups with sterilized women to determine if they did so voluntarily, if they are still satisfied with their sterilization, and if their inability to have children truly reflects their contraceptive and fertility preferences. Moreover, we observe that the prevalence of UFP, once adjusted for Indian women’s experiences with sterilization, is now significantly closer to the estimated prevalence of unmet need (6.9 percent versus 9.4 percent, respectively) (4). This finding stands in contrast to our previously held conclusion that “unmet need for family planning is, *by far*, the larger problem, given its significantly higher prevalence” and has significant implications for where rights-based efforts are needed to ensure that women’s preferences are indeed being met (22).

Our approach is not without its limitations, many of which have been articulated in earlier work (22). Given that the NFHS (or any other DHS or MICS survey, to our knowledge) does not directly measure fertility preferences for sterilized women, it is not possible to calculate comparable prevalence estimates of UFP for this subgroup; we must therefore rely on proxy measures to infer the extent to

which a woman's sterilization is wanted. These measures, which suggest the presence of discordance and shifts in women's preferences since their sterilization (proxied by regret) as well as low quality of care (proxied by insufficient information), may be subject to a number of *ex-post* biases, particularly when noting that 97 percent of sterilized women reported receiving either a high or a satisfactory overall quality of care when they were sterilized (4). Additional investigation and data collection around women's preferences for and experiences with their sterilization are warranted to reconcile these potentially contradictory findings.

In the absence of prospective or *ex-ante* measures of preferences for sterilization, we propose that our estimates of UFP and (when possible) sterilization-adjusted UFP be included as routinely reported indicators for informing programs and policy. By extension, we also recommend that currently reported measures of contraceptive prevalence and "met need" for family planning, which has been identified as a key indicator for the Sustainable Development Goals (SDGs) (27,28), be adjusted for UFP through the removal of women who may have unwanted family planning use. Doing so would result in a less biased estimate of concordant, or wanted, contraceptive use and demand for family planning. More broadly, our findings reiterate our earlier recommendations for family planning and reproductive health surveys to more extensively assess the extent of concordance between preferences and behavior, which would improve our broader understanding of both wanted and unwanted family planning.

References

1. Haakenstad A, Angelino O, Irvine CMS, Bhutta ZA, Bienhoff K, Bintz C, Causey K, Dirac MA, Fullman N, Gakidou E, et al. Measuring contraceptive method mix, prevalence, and demand satisfied by age and marital status in 204 countries and territories, 1970–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet Elsevier*; 2022;400:295–327.
2. Joshi R, Khadilkar S, Patel M. Global trends in use of long-acting reversible and permanent methods of contraception: Seeking a balance. *Int J Gynecol Obstet* 2015;131:S60–3.
3. Ross JA. Sterilization: Past, Present, Future. *Stud Fam Plann* [Population Council, Wiley]; 1992;23:187–98.
4. Government of India. National Family Health Survey, 2019-2021. New Delhi, India: Ministry of Health and Family Welfare; 2022.
5. Follett C. Neo-Malthusianism and Coercive Population Control in China and India: Overpopulation Concerns Often Result in Coercion. *Cato Institute*; 2020.
6. Open Society Foundations N. Against Her Will: Forced and Coerced Sterilization of Women Worldwide. Washington, D.C.: Open Society Foundations; 2011 p. 12.
7. Vicziany M. Coercion in a Soft State: The Family-Planning Program of India: Part I: The Myth of Voluntarism. *Pac Aff Pacific Affairs*, University of British Columbia; 1982;55:373–402.
8. Largent MA. *Breeding Contempt: The History of Coerced Sterilization in the United States*. Rutgers University Press; 2011. 229 p.
9. Patel P. Forced sterilization of women as discrimination. *Public Health Rev* 2017;38:15.
10. Kendall T, Albert C. Experiences of coercion to sterilize and forced sterilization among women living with HIV in Latin America. *J Int AIDS Soc* 2015;18:19462.
11. Baill IC, Cullins VE, Pati S. Counseling Issues in Tubal Sterilization. *Am Fam Physician* 2003;67:1287–94.
12. Bansal A, Dwivedi LK, Ali B. The trends of female sterilization in India: an age period cohort analysis approach. *BMC Womens Health* 2022;22:272.
13. Bansal A, Dwivedi LK, Shirisha P. Sterilization incentives and associated regret among ever married women in India, NFHS, 2015–16. *BMC Health Serv Res* 2022;22:1063.
14. UNFPA. Programme of Action of the International Conference on Population and Development. New York, NY, USA: United Nations Population Fund; 2014.
15. Newman K, Feldman-Jacobs C. Family Planning and Human Rights - What's the Connection and Why is it Important? Washington, D.C.: Population Reference Bureau; 2015 p. 8.
16. Bongaarts J, Sinding SW. A Response to Critics of Family Planning Programs. *Int Perspect Sex Reprod Health* 2009;35:39–44.
17. Silverman JG, Challa S, Boyce SC, Averbach S, Raj A. Associations of reproductive coercion and intimate partner violence with overt and covert family planning use among married adolescent girls in Niger. *EClinicalMedicine* 2020;22:100359.
18. Senderowicz L. “I was obligated to accept” A qualitative exploration of contraceptive coercion. *Soc Sci Med* 2019;239:10.
19. Biggs MA, Tome L, Mays A, Kaller S, Harper CC, Freedman L. The Fine Line Between Informing and Coercing: Community Health Center Clinicians’ Approaches to Counseling Young People About IUDs. *Perspect Sex Reprod Health* 2020;52:245–52.
20. Britton LE, Williams CR, Onyango D, Wambua D, Tumlinson K. “When it comes to time of removal, nothing is straightforward”: A qualitative study of experiences with barriers to removal of long-acting reversible contraception in Western Kenya. *Contracept X* 2021;3:100063.
21. Howett R, Krogstad EA, Badubi O, Gertz AM, Bawn C, Mussa A, Kgaswanyane T, Malima S, Maotwe T, Mokganya L, et al. Experiences of Accessing and Providing Contraceptive Implant

- Removal Services in Gaborone, Botswana: A Qualitative Study Among Implant Users and Healthcare Providers. *Front Glob Womens Health* 2021;2:684694.
22. Canning D, Karra M. Unwanted Family Planning: Prevalence Estimates for 56 Countries. *Stud Fam Plann* 2023. DOI: 10.1111/sifp.12230.
 23. Bradley SEK, Casterline JB. Understanding Unmet Need: History, Theory, and Measurement. *Stud Fam Plann* 2014;45:123–50.
 24. Cleland J, Harbison S, Shah IH. Unmet Need for Contraception: Issues and Challenges. *Stud Fam Plann* 2014;45:105–22.
 25. Government of India. National Family Health Survey, 2015-16. Mumbai: Ministry of Health and Family Welfare; 2017.
 26. Government of India. National Family Health Survey (NFHS-3). Mumbai: Ministry of Health and Family Welfare; 2005 Jun.
 27. United Nations. SDG Indicator 3.7.1 on Contraceptive Use. 2015.
 28. Barot S, Cohen SA, Darroch JE, Galati AJ, Polis C, Starrs AM, Singh S. Sexual and Reproductive Health and Rights Indicators for the SDGs. 2015 p. 14.

Figures and Tables

Table 1: Concordance of Family Planning Use and Fertility Preferences, Estimates for Survey Participants using NFHS-5 (2019-2021)

Standard Approach	
Met need for family planning (Contraceptive Prevalence)	50.1
Unmet Need for Family Planning	9.4
Residual – Concordant Non-Use	40.5
CK2023 Approach	
Wanted Contraceptive Prevalence – Concordant Use (Potentially Wanted Family Planning: 32.9%)	49.2
Unwanted Family Planning	0.9
Unmet Need for Family Planning	9.4
Residual – Concordant Non-Use	40.5
<hr/>	
N	724,115

Notes: Rates are for the NFHS-7 sample of women, unweighted. Unwanted Family Planning is defined as the proportion of sexually active, fecund women aged 15-49 who want to have a child within the next 9 months and who are currently using contraception.

Table 2: Proportion of Sterilized Women, Estimates for India using NFHS-5 (2019-2021)

(1)	(2)	(3)
Proportion of Women Sterilized	No. of Women Sterilized	N
0.299	216,510	724,115

Notes: Summary statistics are weighted using NFHS sampling weights.

Table 3: Sterilized Women with Unwanted Family Planning, Estimates for India using NFHS-5 (2019-2021)

(1)	(2)	(3)	(4)	(5)
Proportion of Sterilized Women who Regret	No. of Women who Regret	Proportion of Sterilized Women who Don't Know	No. of Women who Don't Know	No. of Women Sterilized
0.049	10,609	0.163	35,291	216,510

Notes: Summary statistics are weighted using NFHS sampling weights. Columns 1 and 2 respectively present the proportion and number of sterilized women who reported regret being sterilized. Columns 3 and 4 respectively present the proportion and number of sterilized women who reported not knowing that sterilization would result in their permanent inability to have children.

Table 4: Weighted Cross-Tabulation, Regret and Lack of Information over Sterilization, Estimates for India using NFHS-5 (2019-2021)

		Told sterilization means no more children		
		No	Yes	Total
Regrets being sterilized	No	0.158	0.793	0.951
	Yes	0.006	0.043	0.049
	Total	0.163	0.837	1
N		188,569		

Notes: Statistics are weighted using NFHS sampling weights.

Table 5: Weighted Prevalence of Unwanted Family Planning, Estimates for India using NFHS-5 (2019-2021)

(1)	(2)	(3)
Unadjusted UFP	Sterilization- Adjusted UFP , v.1	Sterilization- Adjusted UFP , v.2
0.009	0.023	0.069

Notes: Summary statistics are weighted using NFHS sampling weights. Column 1 presents the prevalence of unwanted family planning calculated using the CK2023 approach. Column 2 presents the prevalence of sterilization-adjusted unwanted family planning calculated by classifying women who regret being sterilized as having unwanted family planning. Column 3 presents the prevalence of sterilization-adjusted unwanted family planning calculated by classifying women who regret being sterilized or who did not know that sterilization would result in their permanent inability to have children as having unwanted family planning.

Table 6: State-Specific Weighted Prevalence of Unwanted Family Planning, Estimates for India using NFHS-5 (2019-2021)

State	(1) <i>N</i>	(2) Unadjusted <i>UFP</i>	(3) Sterilization- Adjusted <i>UFP</i> , v.1	(4) Sterilization- Adjusted <i>UFP</i> , v.2
Jammu & Kashmir	23,037	0.024	0.042	0.065
Himachal Pradesh	10,368	0.013	0.021	0.080
Punjab	21,771	0.014	0.019	0.039
Chandigarh	746	0.012	0.019	0.033
Uttarakhand	13,280	0.014	0.019	0.052
Haryana	21,909	0.009	0.023	0.049
NCT of Delhi	11,159	0.014	0.018	0.033
Rajasthan	42,990	0.010	0.028	0.076
Uttar Pradesh	93,124	0.010	0.019	0.037
Bihar	42,483	0.006	0.021	0.075
Sikkim	3,271	0.016	0.024	0.035
Arunachal Pradesh	19,765	0.026	0.039	0.055
Nagaland	9,694	0.014	0.019	0.031
Manipur	8,042	0.025	0.029	0.033
Mizoram	7,279	0.009	0.015	0.026
Tripura	7,314	0.018	0.020	0.032
Meghalaya	13,089	0.014	0.019	0.021
Assam	34,979	0.011	0.015	0.021
West Bengal	21,408	0.016	0.032	0.076
Jharkhand	26,495	0.008	0.027	0.074
Odisha	27,971	0.011	0.021	0.034
Chhattisgarh	28,468	0.007	0.021	0.043
Madhya Pradesh	48,410	0.007	0.028	0.083
Gujarat	33,343	0.005	0.014	0.038
Dadra & Nagar Haveli and Daman & Diu	2,713	0.007	0.014	0.042
Maharashtra	33,755	0.006	0.017	0.085
Andhra Pradesh	10,975	0.000	0.022	0.165
Karnataka	30,455	0.010	0.033	0.121
Goa	2,030	0.015	0.034	0.038
Lakshadweep	1,234	0.045	0.059	0.079
Kerala	10,969	0.011	0.036	0.091
Tamil Nadu	25,650	0.006	0.025	0.045
Puducherry	3,669	0.003	0.024	0.053
Andaman & Nicobar Islands	2,397	0.017	0.022	0.043
Telangana	27,518	0.005	0.027	0.157
Ladakh	2,355	0.025	0.044	0.058

Notes: Summary statistics are weighted using NFHS sampling weights. Column 2 presents the prevalence of unwanted family planning calculated using the CK2023 approach. Column 3 presents the prevalence of sterilization-adjusted unwanted family planning calculated by classifying women who

regret being sterilized as having unwanted family planning. Column 4 presents the prevalence of sterilization-adjusted unwanted family planning calculated by classifying women who regret being sterilized or who did not know that sterilization would result in their permanent inability to have children as having unwanted family planning.