Contraception and Reproductive Medicine

RESEARCH

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Rights-based reproductive services in medical schools in Rajasthan, Gujarat and Chandigarh, India: baseline findings of mixed-methods implementation research

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Abstract

Introduction There is a need to assess and strengthen reproductive rights-based family planning and abortion services in Indian medical schools that play a key role in medical education and service delivery. This study presents the findings of baseline assessment across nine schools in two states and one union territory with objective to assess, identify the gaps and improve the status of reproductive rights and evidence-based family planning and abortion services in Indian medical schools.

Methods A convergent parallel mixed methods study was conducted in nine medical schools in Rajasthan, Gujarat, and Chandigarh a Union territory in India from October 2018 to June 2019. In-depth interviews with 33 faculty from the Department of Obstetrics and Gynaecology were conducted. The COM-B (Capability, Opportunity, and Motivation) model of behaviours was used to qualitatively identify barriers and facilitators of reproductive rights-based family planning and abortion services. Reproductive health services provided to 104 women for family planning and abortion were observed quantitatively using a pre-tested checklist.

Findings Providers' preference bias in recommending contraceptive methods to specific clients (wherein sterilisation was offered to women with two or more children and IUCD to women with one child) was observed as barrier to reproductive rights. The facilitators of rights based reproductive services included well-informed faculty regarding providing dignified and respectful care. Barriers included infrastructure gaps, high workload, insufficient human

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resources affecting privacy, and lower awareness and decision-making power of clients. Family planning counselling using the cafeteria approach was offered in 69.4% of cases, 31.6% of women seeking abortion services were offered counselling on both family planning and abortion. Sterilisation or IUD insertion was a pre-condition in 36.8% of women requesting an abortion.

Conclusions Right-based reproductive services around family planning counselling and abortion services were delivered partially despite the medical schools' trained faculty, mainly due to provider bias, high workload, and less autonomy and lower awareness of reproductive rights among women.

Keywords Reproductive health, Abortion, Mixed methods, Medical schools, Rights

Introduction

Attainment of reproductive and sexual health is a fundamental human right, encompassing autonomy, freedom from coercion, education, dignity, and equitable access to services for women [1, 2]. There are significant disparities between high-income countries and low- and middle-income countries (LMICs) regarding reproductive rights related to family planning and abortion services, with women in LMIC are disproportionately disadvantaged. To bridge this gap many international agencies like UNFPA, WHO had developed framework of reproductive rights for enabling the countries to achieve the highest attainable sexual and reproductive health goals [3]. Access to family planning allows women or and partners to make informed decisions about when and if to have children, contributing to improved reproductive and sexual health outcomes and overall socioeconomic development. However, in many LMICs, barriers like inadequate healthcare infrastructure, inadequate privacy and confidentialty, cultural stigmas, poor women autonomy, lower education status, early marriage [4], unmet contraceptive needs and restrictive laws limit access to contraception and safe abortion services. Globally, about 222 million women face unmet contraception needs, increasing maternal and infant health risks and most of these took place in developing nations. Unsafe abortion remains a critical issues, with global estimates indicating that 61% of unintended pregnancies end in abortion (2015 to 2019) [5]. Unsafe abortion contributes to 4.7–13.2% of maternal deaths annually, causing significant social and financial burdens on individuals, communities, and health systems at large [6]. Almost 30% of these deaths are preventable by increasing access to family planning methods.

In India, the National Family Planning Program has historically focussed on population control through target-based strategies rather than empowering women to make their own choices or providing them with universal and equitable access to abortion and contraceptive services [7]. India has nearly 12 million births annually, with infant mortality at 30 per thousand live births and a maternal mortality ratio of 97 per 100,000 thousand live births [8]. Over the past two decades, India's national reproductive health programs focussed on improving family planning and abortion services [9]. As a result, the modern contraceptive prevalence rate in married women increased from 54% [National Family Health Survey, round 4 (NFHS 4)] to 67% (NFHS 5), and the unmet need for contraception declined from 13% (NFHS 4) to 9% (NFHS 5). However, the contraceptive use rate was higher for the irreversible contraceptives, predominantly female sterilisation (38%), as compared to reversible contraceptive methods, including traditional methods (29%), and 33% of women still do not use any contraceptive methods (NFHS-5) [10]. There has been limited focus on ensuring the reproductive rights of the women regarding family planning and abortion services. A nine-state study in India, reported an unsafe abortion rate of 67.1%. The related risk factors leading to mortality were teenage pregnancy, disadvantaged social groups, rural background, pregnancy termination at a late stage, and inadequate access to health care [11].

To enhance contraceptive acceptance, client satisfaction, and the quality of family planning (FP) and abortion services, a rights-based, patient-centric approach is essential [12]. Despite medical schools' pivotal role in healthcare, sexual and reproductive health often receives insufficient attention in their curricula [13]. Studies highlight interns and nurses' inadequate knowledge and skills in providing quality FP services [14]. Limited research assesses reproductive rights-based FP and abortion services in Indian medical schools, particularly regarding faculty perceptions. This baseline assessment of current practices related to FP and abortion services aims to identify gaps, so that effective intervention plans could be developed and implemented to enhance reproductive rights and evidence-based FP and abortion services in Indian medical schools.

Methods

Study period

The baseline assessment was conducted in Gujarat, Rajasthan, and UT of Chandigarh from October 2018 to June 2019.

Study design

This study was part of the larger implementation research with before and after intervention study design to strengthen the adherence to reproductive rights based family planning and abortion services in medical schools in India. Initially, a baseline assessment was done to identify the problems, followed by the implementation phase to implement the need-based intervention in partnership with the stakeholders (faculty, doctors, and nurses etc.,), and endline assessment. In baseline and endline assessment a convergent parallel mixed methods study design (with greater emphasis on qualitative study) was used. The objective of the quantitative component of the mixed methods study was to obtain the family planning and abortion care practices related information of the service providers in real time in the respective clinics with the clients. While the objective of the qualitative study was to explore the perceptions of the service providers regarding family planning and abortion services related practices. Mixing or triangulation of the data was done at the interpretation level. The authors provided the detailed methodology elsewhere (Iyengar K et al. 2022) [15]. This paper presents the baseline findings.

Study area and health facilities

The study employed a two-stage process for selecting medical schools. Initially, two states (Rajasthan and Gujarat) and one union territory (UT) were chosen based on their participation in a national workshop. Subsequently, five medical schools in Rajasthan, three in Gujarat, and one in the Union Territory (UT) were selected, using three selection criteria, i.e., (1) schools that were ten years older or more; (2) schools that permitted to conduct the study; (3) government institutions affiliated to state universities. The central coordinating institute, PGIMER Chandigarh, oversaw study conception, tool development, pre-testing, and staff training.

Study population

For the qualitative study, we included faculty in the Department of Obstetrics and Gynaecology in nine medical schools in three states as mentioned above. For the quantitative component, we included the women visiting the OPD for counselling for family planning methods and/or abortion services. One service provider of family planning services, including doctors (MBBS)/ faculty (MD Gyanecology) in the OPD or counsellors (General Nurse Midwifery), per medical school was included. Counsellors were especially trained in providing family planning counselling and sit in a separate family planning counselling room.

Sample size and sampling technique

Qualitative component: The faculty was purposively selected from the Department of Obstetrics and Gynaecology. The selection criteria involved (1) providing FP and abortion services and (2) teaching undergraduate students. A list of 5 eligible faculty members was prepared and approached in each medical school for an interview, out of which 3–4 were interviewed as per their availability. Data was collected until saturation. A total of 33 interviews were conducted. The authors give a detailed methodology elsewhere. (Iyengar K. et al. 2022) [15].

Quantitative component: We calculated sample size for number of women to be observed using a formula to compare the difference in proportion given by Fleiss et al. for the quantitative study [16]. Assuming the proportion of counselling sessions where the cafeteria approach is used routinely to be 10% at baseline and 30% at endline, type I error 5%, power 80%, and design effect of 1.5, a total sample size is estimated as 75. Considering the ratio of women availing family planning services to abortion services in a day to be 4:1, we planned to observe 60 family planning and 15 abortion counselling sessions, i.e., 6–8 family planning and 3–4 abortion sessions in each medical school. A total of 104 (85 family planning and 19 abortion) counseling sessions were observed. The convenience sampling technique was used to include those women who visited the centre on the day of the field visit by the team. We interviewed 9 service providers including 5 doctors, and 4 counsellors.

Data collection tools and methods

Qualitative component

The grounded theory approach explored the faculty's perceptions of evidence-based practices in family planning and abortion services. A pre-tested, in-depth interview guide was used for counselling on contraceptive methods, including postpartum intrauterine contraceptive device (PPIUCD), the use of the medical eligibility criteria (MEC) wheel, abortion care practices, reproductive rights, supply of contraceptives, teaching/training material and Continued Medical Education attended or conducted related to family planning and abortion services. (Supplementary Material 1). Written informed consent was obtained from the faculty, and a face-to-face interview (50–60 min) was conducted at a convenient place, preferably in the faculty office or doctor's duty room. The manual and audio recording was done. One study member interviewed the faculty, and the other made notes. Responses were again confirmed with the respondents during the interview.

Quantitative study

Trained postgraduate personnel, supervised by the central institute's Department of Obstetrics and Gynecology faculty, conducted observations. Written permission was obtained from the Head of the Obstetrics and Gynecology department at each medical school before the study commenced. During observations, team members obtained verbal informed consent from both women and service providers, ensuring privacy with only one researcher present in the counselling room. Direct face-to-face interviews with women were not conducted. Counselling sessions for women seeking family planning or abortion services were observed using a pre-tested checklist. (Supplementary Material 2). Observations were conducted for one day from 8:00 am to 1:00 pm within the three-day data collection period. The checklist was developed with input from a core group of experts, including faculty members from obstetrics and gynaecology, community medicine, and public health. It was pre-tested at two non-study sites. The experts consulted published literature on evidence-based family planning and abortion services to identify parameters for assessing service quality. Parameters evaluated included audio and visual privacy during counselling. Counselling session durations were recorded using a stopwatch. One interview with a family planning service provider (5 doctors and 4 counsellors) per medical school ($n=9$) was conducted to gather information on persistent family planning care practices using an interview schedule. (Supplementary Material 3). These service providers were not the same as qualitative study. Additionally, family planning clinics were observed using a pre-tested checklist to assess facilities, including dedicated space, availability of contraceptive methods, teaching resources, and use of the medical eligibility for the contraceptive wheel (MEC Wheel). (Supplementary Material 4). A record review of family planning and abortion services provided in the last three months was also conducted in each medical school, focusing on contraceptive uptake and the number of medical or surgical abortions, using a pre-tested checklist.

Table 1 Background characteristics of the teaching faculty of the department of obstetrics and gynecology interviewed in depth in medical schools

Faculty interviewed in-depth	
Age group	*N* = 33 (%)
38–44	8 (24.2)
45–54	21(63.6)
55–64	4(12.1)
Total experience (years)	
1–9	13 (39.3)
10–19	12 (36.6)
20–29	3 (9.0)
29 and above	2 (6.1)
Designation	
Professor	8 (24.2)
Associate professor	14 (42.4)
Assistant professor	10 (30.3)
Senior Medical officer	1 (3)

Data analysis

The audio recordings were transcribed and translated into English. The transcripts were read and reviewed independently by the two authors before being reviewed by the lead author. Thematic analysis was conducted to identify memos, codes, sub-themes, and themes. WHO framework for ensuring human rights in the provision of contraceptive information and services was used to delineate the reproductive rights based services in the medical schools qualitatively [3]. The COM-B framework was used to provide insight into the three determinants that influence Behaviour (B), i.e., Capability (C), Opportunity (O), and Motivation (M) *[here, adherence to reproductive rights related to family planning and abortion service and practices]* [16].

The quantitative data were entered into Microsoft Excel and analysed using IBM SPSS version 22 [17]. Proportions and means of quantitative variables were estimated. The chi-square test was applied to test the significance of the difference between groups, and differences were considered significant at 95% intervals.

The triangulation of the quantitative and qualitative observations done at the interpretation level to infer the explanation of the family planning and abortion care practices with respect to the perceptions of the service providers.

Ethical approval and permission

The study received ethical approval from the ethics committee of PGIMER (PGI/IEC/2018/001270). Prior permission was obtained from the Director of Medical Education and Research of each respective state and Union Territory. Additionally, written permissions were obtained from the Directors and Controllers of all participating medical schools. Informed verbal consent was obtained from all the service providers and clients before interviews and observations.

Results

Qualitative study findings

Background characteristics of the 33 faculty (8 professors, 14 associate professors, ten assistant professors, and one senior medical officer) interviewed in-depth are given in Table 1. The codes, subthemes, and themes, as per the thematic analysis of the interviews, are summarised in Table 2.

Table 2 Thematic analysis of in-depth interviews with faculty of the department of obstetrics and gynaecology regarding reproductive rights for family planning and abortion services as per sub-components of the COM-B framework

Theme and Sub theme	Codes	Verbatims	COM-B sub-components	Categories
I. Reproductive rights-based family planning services				
Facilitators				
Availability of family planning methods	Regular supply of contraceptive methods	*We utilize funds given to deptartment under JSSK (Janani Suraksha Yojana Karayakaram) scheme we ensure that 4 months supply is available* *I don't remember any shortfall in my practice*	Physical Opportunity	Institute level
Access to family planning methods	Availability of invasive and non invasive methods	*OCP(Oral Contraceptive Pill) we give, For CuT they come to medical college. For invasive techniques, they come*	Physical Opportunity	Institute level
Informed care through counselling by counsellors and preference for using contraceptive method is considered	Availability of counsellor	*We have a counsellor: RMNCHA (reproductive maternal newborn child and adolescent health) counsellor and* *separate family planning counsellors*	Physical Opportunity	Service provider (SP) Level and institute level
	Choice of contraceptive offered, FP stamp for counselling on card	*We stamp the card also. We have a stamp made for family planning counselling. A seal is there in the ANC (antenatal care) card indicating her preference* *We are not forcing any one for contraception and we are giving them cafeteria of services*	*Automatic motivation*	SP level
	Re-enforced counselling on multiple occasions	*So counselling is done during that period other- wise antenatal visit and pre labor conditions, if we could not counsel with in that period we also counsel her after delivery with- in 48 h, that is post- partum insertion*, *There are pamphlets in OPD (outpatient department) and labor room, social worker counsel about PPIUCD (postpartum intrauterine device) insertion in OPD and labor room*	*Reflective Motivation*	SP level
Consented care	Consent obtained before insertion of PPIUCD Woman's consent is given importance	*We are taking informed consent of the client when she is not in labor just before insertion of PPIUCD consent is taken* *We have consent forms from government of Rajasthan. We have separate consent forms. In form the "Labharti" means the client has to sign the doctor has to sign and monetary benefits are also displayed. so that the patient is aware of everything. Record is maintained for that and one kept with us and other is given to the client only her consent we consider we don't even consider her husband or relatives consent. We have a format for the consent Signature is taken before delivery and then countersignature*	*Reflective Motivation*	SP level
Right to privacy and confidentiality	Maintaining auditory and visual privacy	*Yes, in our antenatal clinic there is interaction of patient with single doctor one by one. We take her for exam, where curtain is there. We take care of their privacy.*	*Physical Opportunity*	SP level and institute level
Evidence based quality family planning services using MEC wheel/eligibility checklist	Eligibility checklist used for selective procedure	*Yes, if you are including the sterilization and these operations also, then there's a booklet which is having all the things, whether what has the patient been checked for, whether she is suitable for it or not. And there's the sign of the service provider also whether he has checked all the things or not. And in Cu-T or whatever FP we are using, there's a checklist, after checking that checklist for a particular contraceptive method*	*Reflective Motivation*	*Service provider level*
	Used for teaching purpose	*We have MEC (medical eligibility criteria) wheel with us, it is part of their lectures, we included MEC wheel during the injectable contraceptive training. We show them in all lectures on FP.*	*Reflective Motivation*	*Service provider level*

Table 2 (continued)

Theme and Sub theme	Codes	Verbatims	COM-B sub-components	Categories
	MEC wheel followed at rural health training centers (RHTC) and primary health centers's (PHC) level/para medical staff	*OBG (obstetrics and gynaecology), RHTC and PHC level staff usually use it, ANM (auxiliary nurse midwife) and ASHA (accredited social health activist) bring them on duty. LHVs (lady health visitors) have checklist, they are trained to used it.*	*Reflective Motivation*	*Institute level*
	Helps to counsel and assist to choose, before provision of contraceptive services	*WHO MEC wheel, we have RMNCHA counsellors who are doing contraceptive counselling to all the patients*	*Reflective Motivation*	*Service provider level*
Barriers to rights-based family planning services				
Lack of privacy and confidentiality	Infrastructural gaps in space, and time constraints	*It is very challenging, in a public hospital to ensure the right of every women visiting because at times infrastructure do not support, we don't have sufficient manpower to deal with, we are trying to raise the gap and do as far as possible from our side. Auditory privacy is not maintained*	Physical Opportunity	Institute level
	Heavy rush of patients	*In OPD it is difficult because large chunk of patients are there, for counselling purpose, counselling is more of a health education type so that can be done in a group, one to one counselling patient wants to have, or wants to tell something, which need not to be disclosed to other patients, she can very well come have one to one conversation.*		
	Shortage of human resources	*"We are working with 50% staff, it is not possible for me to sit in OPD and ask the watch man to send one patient at a time, that is possible if we are fully staffed only then we can maintain their privacy. At present doctor patient ratio is not maintained, here one OPD is managed by one watchman"* *"We have number of examination rooms, but we are running critically short of faculty, with such good work 15–20 deliveries in a day we do have infrastructure but require more faculty to handle things and privacy issues. There are just 2 nursing staff. who are taking care of ANC, infertility clinic, Gynae clinic and cancer patients, how is it possible. That has to be taken care of by the authorities."*	*Physical Opportunity*	*Institute level*
	Management problems	*"I think you have seen the OPD, it is as private as it can get in a government hospital. We have separate cubical for examination, but patients just open the door and walk in, we are trying to maintain it. Huge rush can be managed by the line system if strictly maintained. We are trying to do that but not yet achieved success"*	*Physical Opportunity*	*Institute level*
Lack of use of evidence based medical eligible checklist or MEC wheel	MEC wheel/ checklist not used	*Clinical eligibility assessed from memory and experience through verbal questioning*	*Automatic Motivation*	*Service provider level*
		I am doing that by my experience and not using MEC, *we usually do not insist up on a base of checklist, we conjure the information and decides on our own,*	*Automatic Motivation*	*Service provider level*
	Shortage of MEC wheel	*we don't have wheels, criteria we do it from our memory*	*Automatic Motivation*	*Service provider level*
	Lack of awareness and training of counsellors of MEC Wheel.	*MEC wheel not aware of, we assess but eligibility wheel not used. But I don't think they are sensitized to use the wheel, they are basically trained by the state government*	*Physical Capability*	*Institute level*
II. Reproductive rights-based abortion care services				
Facilitators of provision of safe abortion services				

Table 2 (continued)

Theme and Sub theme	Codes	Verbatims	COM-B sub-components	Categories
Availability and accessibility of abortion services	Abortion services are available and accessible for all the women irrespective of duration of gestation	*Abortion is freely provided, ours is the only center where we get patients from private facilities and other sectors, they come only for second trimester abortion with anomalies, with failed or retained products in uterus. As many a times the MTP(medical termination of pregnancy) is done outside without the supervision of the Gynecologist as the women directly take them (MTP drugs) from the chemist. Often a failure or retained products is the common presentation in the outpatient department*	*Physical Opportunity*	*Institute level*
Follow up is ensured for medical abortion	Medical method is chosen if women can come for follow up in case of complication arising of abortion	*We see the compliance of women and follow up, she should not be lost to follow up, if we give MTP pill it is seen that she is coming for the subsequent visits to know completion of abortion,* *If we are sure enough that patient can come again to us or any health provider if any complication is there or she can be under follow up, then we advise medical method of abortion*	*Physical Opportunity*	*Institute level*
Informed consent of women	Consent of woman only required	*Only her (client) consent is obtained. She is an adult she can give consent. We don't insist on bringing a relative or anyone else. Surgical procedure requires one person along. Only client's consent is required, it is her reproductive right. We are not going to un-necessarily harass her, but there has been case against doctor, therefore preferably if anyone is there if any complications happens but it is not mandatory, no need of anyone else, only her wish and consent is required.*	*Psychological Capability*	Patient level
Provision of quality services	Standard protocols followed	*We investigate and get the USG (ultrasonography) done before abortion [as per the protocol]*	*Psychological Capability*	Service provider level
		Medical or surgical abortion as per gestational age or patient choice and offer accordingly medical abortion, MVA or Dilation and Evacuation (D&E)	*Reflective Motivation*	Service provider level
Respect for reproductive rights of women to avail abortion services	Belief in reproductive rights of women as per her legal age	*As per MTP law if she is a major she has all the righst, we would not separate her from any other married women who seek abortion we just counsel her regarding method and whatever she selects is given to her*	*Reflective Motivation*	Service provider level
		She has the right to terminate her pregnancy, she can give the consent	*Reflective Motivation*	Service provider level
		She is an adult, she can give consent, usually opt for medical abortion, if she says it's a consensual thing and no rape then it can be given	*Social Opportunity*	Service provider level
Barriers of provision of safe abortion services				
Lack of access to free medical abortion services	Out of pocket expenditure on buying medicines for medical abortion	*"Client has to buy from outside. MTP kit is not available in government supply. she has to buy for it for 550 rupees (USD 6.8), if she can then we ask her to buy, if she cannot then suction evacuation is always there."*	*Physical Opportunity*	*Institute level*
		"Misoprostol is available, mifepristone is not"		
Lack of accessibility of medical abortion to women from remote areas	Restricted access to medical abortion for women in the remote villages	*In case the patient is coming from remote village, or we are sure that the patient will not come for follow up or she will not consult any doctor if any complication is arising, then we will definitely opt for Manual Vaccum Aspiration (MVA) or surgical method.*	*Automatic Motivation*	*Service provider level*
Requirement of accompanying person	Delayed services due to need for accompanying family member for fear of complications	*We first see them in OPD, it's not like we do the procedure on the same day, we ask the patient to come on empty stomach the next day by 8 o clock and with a relative, not necessarily husband, we do like to have attendant for consent, consent of the women and the attendant in case some-thing goes wrong. Someone is required, in case sedation is given and any complication arise so we ask the relative to stay back. If no-one is there then we ask her to bring some one, and they return in 2–3 days*		
Husband consent is required for abortion with sterlization	Requirement of additional consent of husband in case of abortion with tubal ligation	*A written consent is taken. We take her consent if the husband is available then we take his consent as well, for tubal ligation his consent is taken, for plain MTP we don't.*		

Table 2 (continued)

Theme and Sub theme	Codes	Verbatims	COM-B sub-components	Categories
Restriction and fear by law in case of unmarried girls due to its being a medicolegal case and complications	Fear of medico legal case in case of unmarried girl	*With fear of MLC (medico-legal case) they don't go for abortion. Even if the girl says that I have done with my own consent the relatives say that no it was not her consent. The parents of the girl also know that it is going on and she fears. If she refuses also we have to tell the parents, but by chance if complication occurs then consent is necessary, nowadays allegations are on doctors and everyone wants to be safe.*	*Automatic Motivation*	Service provider level
	Mandatory police notification to be done and court permission is required in unmarried girls	*Inform police /jurist in MLC cases. Inform police in all unmarried cases. In unmarried cases we go as per medico legal procedure, for that we need to take the permission of the court, weather of termination of pregnancy is to be done, we have to follow the court, we have to follow the directive of the court.*	*Reflective Motivation*	Service provider level
	Documentary confirmation of age in unmarried girls	*we have to check if she is 19, below 18 then we have to inform police, and we have to see that with her consent, she or her parents are not ready for case then we can do. We have to take consent*	*Psychological Capability*	Service provider level
	Consent of family required in case of unmarried girls	*Consent of parents or relative is needed* *Keep parents and relatives in confidence in high risk pregnancy* *Relatives are called for fear of complication*	*Reflective Motivation*	Service provider level
	Requirement of presence of family member	*she should not be alone, if some mishap happens them she should have someone who can attend. Consent is hers only, we admit for medical and also call family member*	*Reflective Motivation*	Service provider level

Reproductive rights and evidence-based family planning services as per WHO reproductive rights framework

Non-discrimination in provision of contraceptive information and services

Monetary incentives which were target based for methods like CuT and sterilisation can lead to discrimination, which may be biased towards a specific method and may not be in the client's best interest as per a rights-based approach.

"*No one comes for family planning, it is not a necessity, if they are getting money they will come but without it they wouldn't"* (Associate professor, 10 years of experience from Rajasthan).

Availability of contraceptives information and services

There may be problems due to shortage of supplies as sometimes there's inadequate supply of MTP kits and contraceptives mainly emergency contraceptive pills which compromises access to services.

"*Client has to buy from outside. but MTP kit is not available in govt supply she has to buy for 550 Rs, if she can then we ask her to buy, if she cannot then suction evacuation is always there".(Associate professor, 7 year's experience from Gujarat).*

Supplies of contraceptives and MTP kits were adequate in most, barring a few institutes where clients had to incur out of pocket expenditure due to non-availability of MTP kits, which was reported as a significant barrier.

Accessibility of contraceptive information and services

Due to heavy rush of patients adequate time could not be devoted by doctors/counsellors to provide information and counsel the clients on the benefits and side effects of various family planning methods and abortion care services.

"*It is very challenging, in a public hospital to ensure the right to every woman visiting. it is very challenging because at time infrastructure is inadequate, we don't have sufficient manpower to deal with, we are trying to raise the gap. We do as far as possible from our side" (Associate professor 15 years experience from Gujarat*).

Counselling is done in a group by the counsellors and sometimes individually by doctors depending upon availability of time and space.

"In opd it is difficult because large chunk (number) of patients are there, for counselling purpose, counselling is more of a health education type so that can be done in a group" (Professor, 30 years experience from Gujarat).

Acceptability of contraceptive information and services

There were many perceived fears and misconceptions about contraceptive methods among the women regarding side effects (like excessive bleeding/pain due to intrauterine contraceptive device-IUCD), which were deep-rooted and complex affecting the acceptability of these methods.

"It (IUCD) will bleed a lot, it will cause me to have much pain, that bias we (faculty) are not able to remove for CuT, that is (IUCD) very less used, OCP (oral contraceptive

pill) patients are using, rather misusing as for ten years she is taking these, and she has no idea that it should not be taken for so long, so that is kind of abuse, even a postpartum woman within a month will say give me OCP because the husband is not ready to use a condom."

(Professor, 5.5 year's experience, Gujarat).

Quality of contraceptive information and services

Quality is ensured by use of medical eligibility check list especially before sterilization procedures or IUCD or hormonal pills; and also through trained separate family planning counsellors. However, use of eligibility checklist was inconsistent.

> *OBG (obstetrics and gynaecology) specailists, RHTC and PHC level staff usually use it (medical eligibility criteria), ANM (auxiliary nurse midwife) and ASHA (accredited social health activist) bring them on duty. LHVs (lady health visitors) have checklist, they are trained to used it.*

(Professor, 5.5 year's experience, Gujarat).

Privacy and confidentiality

They agreed with the need to provide dignified and respectful care ensuring total privacy and confidentiality but due to infrastructure gaps, space constraints, heavy workload, and lack of human resources, many a times, privacy and confidentiality was compromised, during counselling. Service providers tried to ensure privacy with single point entry.

> *Yes, in our antenatal clinic there is interaction of patient with single doctor one by one. We take her for exam, where curtain is there. We take care of their privacy.*

(Associate professor, 10 years of experience from Gujarat)

Informed decision making

Informed consent is mostly taken from the client when providing IUCD/PPIUCD, but due to social barriers, male dominated society and lack of education and awareness the women are not empowered to give their own consent.

"The most challenging thing is that women are not decisive at all. It is her right to produce or not produce but for this decision all other family members should give consent" (Assistant professor, 6 years experience from Rajasthan).

"If patient hesitates, we ask the male, and when we tell her he has agreed, then she also agrees." (Associate professor, 10 years of experience from Rajasthan).

Women's lack of autonomy to decide for themselves choosing family planning methods or availing abortion services was a significant barrier to the reproductive rights-based approach.

> *It is male dominance (in the society) when she will have children, and the number of girls and boys she will bear are decided by the husband and the mother-in-law only.*
> *(Assistant professor, six years' experience, Rajasthan)*

Participation

It was perceived that pregnant women did not take advantage of free family planning services due to a lack of concern about their health, ignorance, low educational status, lack of understanding, and poverty.

> *"The patient needs to be educated. They are least bothered about their hygiene and what will happen to them if they have pregnancies at short intervals. So if they are aware themselves, their reproductive rights will be ensured automatically because the Government is spending so much." (Associate professor, 14 years' experience, Rajasthan).*

Reproductive rights based teaching practices

Faculty stated that teaching and training of interns was facilitated in the clinics. They conduct counselling sessions with the clients under supervision of faculty.

> *They (interns) are good enough to counsel them (women) the importance of abortion and advising contraception along with abortion practices. For conducting the procedure themselves. they might not be so competent.*
> *(Assistant professor, ten years' experience, Gujarat)*

Reproductive rights and evidence-based safe abortion services

The facilitators of safe abortion services to all women coming alone to OPD within 7–8 weeks of pregnancy were that no woman was refused abortion services, only a woman's consent was required, and all standard protocols were followed.

> *"Abortion is freely provided." (Professor, 30 year's experience, Gujarat).*

The protocol for providing medical termination of pregnancy to an unmarried 19-year-old woman involved mandatory informing the police.

> *"We have to check if she is 19; if below 18, then we have to inform the police, and we have to see that with her consent, she or her parents are not ready for the case (medicolegal case), then we can do. We have to take consent" (Professor, 35 years' experience, Rajasthan).*

Husband consent was a must if abortion was to be followed with tubal ligation.

> *"We take her consent if the husband is available, then we take his consent as well, for tubal ligation" (Professor, 30 year's experience, Rajasthan).*

COM-B framework analysis

The model includes factors related to capability (physical and psychological), opportunity (physical and social), and motivation (reflective and automatic), which ultimately influence behaviour (desired and undesired). These subcomponents functions at the level of institute and service providers levels. The barriers and facilitators reported by the faculty in adhering to reproductive rights-based family planning and abortion services according to the COM-B model is shown in Fig. 1.

Quantitative study findings

A total of 85 family planning and 19 abortion care counselling sessions were observed. Among the women observed during family planning counselling sessions, 20% were nullipara, 27% para one, and 53% multipara. Among those observed for abortion services, 18/19 (94.7%) were para two and above with a gestation period of 8–14 weeks. (Table 3). Most clients availing of family planning services were counselled alone (92.9%). The cafeteria approach was offered to 69.4% of clients. More than 50% of women in all parity categories were offered a choice of at least three contraceptives. (Table 4). In 36.8% of cases, acceptance of either sterilisation or IUCD was a pre-condition for abortion. Consent for abortion was taken in 100% of cases before abortion. In 68.4%, the woman gave consent, whereas in 31.6% of clients, the woman and her husband gave consent. Family planning counselling was provided to 68.4% of these clients, but counselling using the cafeteria approach was used in only 31.6% of cases. Overall, 76.4% of nullipara, 54.2 para one, and 75.6% of multipara women were suggested three or more contraceptives. Most commonly offered

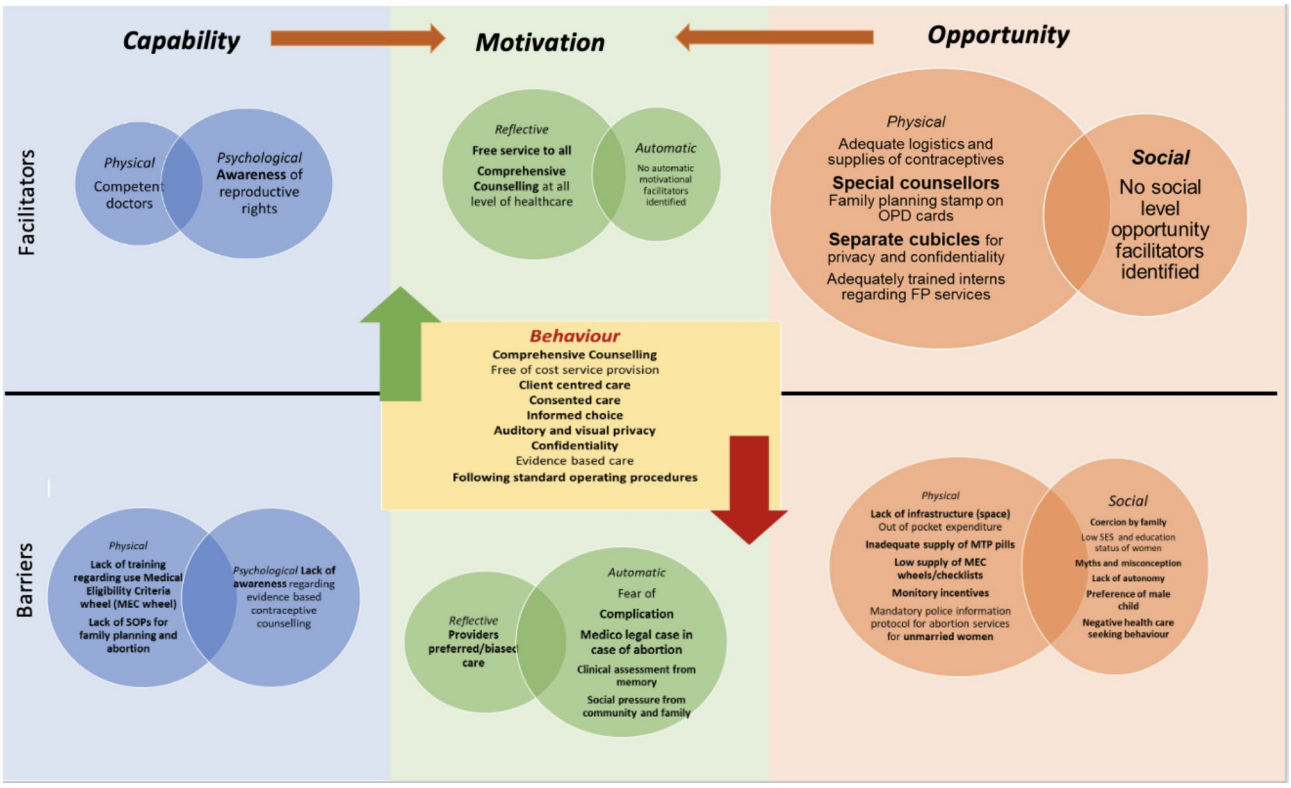

Fig. 1 Facilitators and barriers perceived by the faculty to adhere to reproductive rights regarding family planning and abortion services as per the capability, opportunity, and motivation leading to the behavior model

Table 3 Background characteristics of clients observed during family planning counselling and abortion care services in outpatient departments in medical schools

Parameters	*N* (%)
Clients observed in OPD* availing family planning counselling services	85 (100)
Gravida	
Nullipara	17 (20)
Primigravida	23 (27)
Multipara (2 or more children)	45 (53)
Clients observed in OPD availing abortion care services	**19(100)**
Gravida	
Primigravida	1 (5.3)
Para two and above	18 (94.7)
Period of gestation	
0–7 weeks	1 (5.3)
8–14 weeks	15 (78.9)
15–20 weeks	3 (15.8)

*OPD: Outpatient department

contraceptives to nullipara were OCP, PPIUCD and DMPA; para one women was condom, PPIUCD, DMPA; and multipara was PPIUCD, DMPA and tubectomy. Most of the clients (92.9%) availing of family planning services were counselled alone. Auditory privacy was assured to 20% of clients before starting the counselling. The cafeteria approach was used for counselling in 69.4% of clients, but the MEC wheel or medical eligibility checklist was not used in any case. None of the clients were counselled for emergency contraceptives. 85.9% were provided contraceptives from the clinic.

All nine service providers (four doctors, and five counsellors) stated that their preferred choice of contraceptive for a woman with three children was sterilisation (tubectomy), followed by IUCD (55.6%). One-third of the service providers mentioned that they would need consent from a woman plus one family member or husband providing abortion services. Two providers stated to the researchers that sterilisation or IUCD insertion was a pre-requisite condition for providing abortion services. (Supplementary Material 5). Observation of family planning clinics in nine medical schools is given in Supplementary Material 6. A record review of contraceptives and abortion care showed stockouts and irregular supply of emergency pills. *Chayya* is seen in 5/9 medical schools (Supplementary Material 7).

Discussion

The baseline findings provided insight into the prevailing practices related to reproductive rights based family planning and abortion care services and the reasons thereof in nine medical schools in India. This mixed methods study used both quantitative and qualitative data to provide comprehensive view of reproductive rights based services including non-discriminatory, availability, accessibility, acceptability, quality, privacy and confidentiality of family planning and abortion services in the medical schools. Further the COM-B framework assisted in underpinning the reasons of the prevailing service provider's practices and behaviours.

A qualitative study reported provider biases, with providers favouring certain contraceptive methods (DMPA, IUCD, and sterilisation) due to perceived client incapacity for choice. Provider bias hindered information access and choice rights [18]. While the WHO's medical eligibility checklist (MEC) wheel improved family planning service quality elsewhere, its limited use by faculty in this study stemmed from reliance on verbal questioning [19]. This finding was similar to a study in Ethiopia and Senegal, where time constraints, patient overload, lack of awareness, experience and training of service providers, and lack of supplies of the MEC wheel were the reported barriers [20]. Privacy and confidentiality were compromised in government setups due to workload constraints, highlighting the need for improvement aligned with FP 2020 standards. Despite free reproductive health services, clients lacked autonomy and awareness, deterring service utilisation. Similar hesitancy was noted in rural Telangana, where women faced familial barriers to healthcare access [18].

Some providers in this study endorsed inserting PPIUCD even without a woman's consent, relying on her husband or mother-in-law's approval. This reflects providers discrimination. This echoes findings of women's limited autonomy in Asian contexts, compounded by factors like education gaps, socioeconomic status, and cultural beliefs [21]. Lack of autonomy often intersects with coercion, whether from providers or family members, resulting in decisions not aligned with the patient's preferences [22].

Target-driven monetary incentives for methods like IUCD and sterilisation may lead to biased decisions, undermining rights-based care. Widespread myths and misconceptions, particularly regarding IUCD, hinder method acceptance, aligning with broader social barriers in India [23]. Notably, clients often prefer abortive methods like Medical Termination of Pregnancy and or short term emergency contraception over long term reversible contraceptive methods, as seen in Maharashtra, reflecting a preference for curative instead of preventive contraception management [24]. In the qualitative interviews faculty responded that abortion services were freely provided, however, in real practice there was contradiction in what was being practiced, where the spousal consent was required in 31.6% cases of clients seeking abortion services at 7 weeks. The need for spousal consent highlighted a lack of client autonomy provision, conflicting

Table 4 Observation of family planning counselling and abortion care sessions in medical schools

Clients observed	*N* = 85	100%
Observation parameters		
Clients who were given couple counselling	6	7.1
Clients for whom auditory privacy was ensured before starting the session	17	20.0
Clients for whom visual privacy was ensured before starting the session	5	5.8
Clients counselled using eligibility checklist or Medical Eligibility Criteria Wheel	0	0
Clients counselled using cafeteria approach	59	69.4
Clients who were provided contraceptives from the clinic (government supply)	73	85.9
Clients counselled for emergency contraceptive methods	0	0
Clients counselled for Depot Medroxy Progesteron Acetate (DMPA/*Antara*)	71	83.5
Average duration of counselling (in minutes)	7.4	
Contraceptive advised to Nullipara women	**17**	**100**
Condom	12	70.6
IUCD	10	58.8
OCP	15	88.2
ECP	0	0
DMPA	13	76.5
POP	0	0
Implantable	0	0
Chaya	3	17.6
Tubectomy/ vasectomy	0	0
Clients offered less than 3 contraceptives	4	23.5
Clients offered more than equal to 3 contraceptives	13	76.5
Contraceptives advised to woman with one live child (para one)	**23**	**100**
Condom	9	37.5
IUCD	17	70.8
OCP	13	54.2
ECP	0	0
DMPA	23	95.8
POP	0	0
Implantable	0	0
Chaya	1	4.17
Tubectomy/ vasectomy	2	8.3
Clients offered less than 3 contraceptives	11	45.8
Clients offered more than equal to 3 contraceptives	13	54.2
Contraceptives advised to woman with two live children (para two and above)	**45**	**100**
Condom	24	53.3
IUCD	22	48.9
OCP	26	57.8
ECP	0	0
DMPA	31	68.9
POP	0	0
Implantable	0	0
Chaya	0	0
Tubectomy/ vasectomy	38	84.4
Clients offered less than 3 contraceptives	11	24.4
Clients offered more than equal to 3 contraceptives	34	75.6
Abortion care services		
Clients observed	**19**	**100**
Clients for whom sterilization/ IUD insertion was a pre-condition for abortion	7	36.8
Clients whose consent taken before termination of pregnancy	19	100
Consent for abortion obtained from		
1. Woman herself (only)	13	68.4
2. Woman and husband both	6	31.6

Table 4 (continued)

Clients observed	*N* = 85	100%
3. Other Family member	0	0
Clients provided with family planning counselling along with abortion services	13	68.4
Clients who were provided family planning counselling using cafeteria approach	6	31.6

DMPA: Depot Medroxy Progesteron Acetate; IUCD: Intrauterine copper device; IUD: Intrauterine device; OCP: Oral contraceptive pills; ECP: emergency contraceptive pills; POP: progesterone only pills

with faculty claims of consent being sufficient. This was found to be at variance with the faculty response, that abortion was usually provided with the client's consent only, with the presence of a relative being a requirement in case of complications. This restriction, echoing concerns from previous studies on unwanted pregnancy in rural India [25], reflected automatic rather than reflective motivation (as per the COM-B framework) on the part of service providers.

Supply shortages compounded infrastructure challenges, leading to privacy and confidentiality lapses for clients, alongside social and cultural biases impacting autonomy. The Indian government, in its FP 2030 Vision document, has reiterated its commitment to achieve universal health coverage by including uniform and equitable access to free family planning and abortion services and informed decisions about modern contraception as a central key element [26]. To validate the qualitative statements of the faculty, we quantitatively observed the practices directly in the outpatient department for family planning services. The quantitative findings have shown that most (85.9%) of the clients were provided free contraceptives from the clinic. The contraceptive methods and MTP kits were in adequate supply in most of the study schools, indicating universal availability, accessibility, and affordability of contraceptive methods. These findings are similar to a study done in Ghana in 51 health facilities where almost all the public health facilities had adequate availability of contraceptives (75% had oral contraceptive pills, 75% had condoms, and 100% had injectables) [27]. As the MEC wheel was unavailable in the clinics during the counselling sessions and comprehensive contraceptive information was not provided to the clients, this affected the quality of these services. Most service providers (7/9) assessed the woman's eligibility for PPIUCD by their clinical judgment. This finding is similar to the earlier findings by Gupta M et al. (2019) in six medical schools in India [14]. Consultation with the family member of a client who attended the clinic alone before providing a family planning method by the service provider impacted women's right to decide and choose freely or give consent for themselves as per WHO's recommendation that supports the elimination of third-party authorisation including that of spouse for provision of contraceptives and services [28]. Most clients were counselled by doctors or counsellors regarding family planning and abortion care services to help them make an informed choice. However, counselling using a cafeteria approach with a basket of choice for contraceptive methods was lacking for one-third of clients seeking this service. These findings are similar to a study in India where 73% of clients were asked about their method of preference, and only 39% were told about other methods [12].

A choice of three or more contraceptive methods was given to more than 50% of all women. Provider bias in counselling was observed. Counselling for women with two or more children was pitched more towards tubectomy (84.4%), IUCD (49.9%), or DMPA (57.8%), and none were counselled on the use of progesterone-only pills or non-steroidal hormones (*Chhaya).* Counselling should be non-directional, providing complete and accurate information while respecting a client's autonomy to make an informed decision [29]. Only 20% of the clients in this study were provided adequate privacy and confidentiality, which are essential contributors to a client's satisfaction with the quality of services offered. Free medical abortion services were available at all nine medical schools, with eight also offering surgical abortion facilities. In rural Rajasthan, out-of-pocket expenses due to unavailable medical termination of pregnancy (MTP) kits were identified as a significant barrier [30]. It has been seen that due to the non-availability of free MTP kits, the healthcare providers were more likely to switch to surgical methods in patients who were unable to afford the kits, which adversely affected their right to equitable access and choice of abortion method. Providers often resorted to surgical methods for patients unable to afford the kits, impacting their access and choice. Additionally, 36.8% of clients were imposed with preconditions for abortions like sterilisation or intrauterine device insertion, indicating conditional access. This percentage was higher compared to a previous study in six states, ranging from 8% in Uttar Pradesh to 26% in Madhya Pradesh [31]. Fear of legal issues and police involvement hindered access for unmarried young women, often leading to unsafe practices or delayed care due to stigma and confidentiality concerns, echoing broader challenges within India's abortion services [12, 17, 18]. The choice of abortion method also hinges on follow-up. Medical methods, like MTP pills, are advised when providers were confident patients would return. This underscores the need for tailored reproductive health services, especially in remote areas where follow-up challenges impact method selection.

This study's strength lies in its mixed methods approach, offering a comprehensive evaluation of family planning and abortion services in medical schools. Measures were taken to ensure anonymity and minimise bias, with researchers using a pre-tested interview guide and conducting uniform interviews. However, the purposive selection of medical schools introduces potential bias, limiting generalizability. Medical school wise variations in counselling and treatment protocols, curricula and teaching methods, institutional, infrastructural and logistic differences which are unique to the selected schools and state wise cultural and socioeconomic differences might influence counselling and treatment outcomes affecting the external validity of the results. The study focused on senior faculty members as they hold key decision-making positions in teaching and service provision. Generation bias is acknowledged as younger trainees/ doctors tend to have a different knowledge, attitude and practice (KAP) values.

Barriers and facilitators to access to quality care within the ambit of a patient's reproductive rights were identified from the faculty responses and corroborated with the direct observations. This was based on the premise of the COM-B model; that at any given time capability and opportunity interact dynamically to motivate human behaviour. Change in behaviour is imperative to overcome the challenges of changing health scenarios, and to facilitate that change for the desired outcome of providing rights based services. The lack of awareness about the MEC wheel, inadequate training of the counsellors and preference for verbal questioning by the faculty contributing to its non-usage reflected a barrier at the level of capability and motivation of the service providers. It is recommended to promote fair informed consenting process and decision making, reduce the providers biases in offering contraceptives and consistent use of medical eligibility checklist refresher training session or sensitization workshops to be organized. Wherever possible, upgrading or rearranging existing infrastructure to address space shortages in family planning clinics and outpatient departments suggested to ensure privacy and confidentiality.

Conclusion

This mixed methods study provided a comprehensive analysis of reproductive rights-based services, including non-discriminatory access, availability, quality, privacy, and confidentiality in family planning and abortion services at medical institutions. However, challenges such as limited space, inadequate staffing, and logistical constraints hinder the delivery of comprehensive, rights-based reproductive healthcare. Social barriers, including poverty, lack of education, limited awareness of women's rights, and deep-rooted social and gender biases, further undermine women's reproductive autonomy. Provider bias, reliance on spousal consent, and sterilization requirements for certain procedures also restrict women's access to care. Inconsistent use of medical eligibility guidelines compromised service quality, and despite trained professionals and available contraceptive options, women's reproductive rights were not fully ensured. Addressing these obstacles is crucial to advancing reproductive justice and ensuring equitable, rights-based care in all healthcare settings.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s40834-024-00316-5.

Supplementary Material 1: In-depth interview guide for faculty

Supplementary Material 2: Direct observation of FP Clinic/ FP counseling/ abortion services

Supplementary Material 3: Interview Schedule for a family planning service provider

Supplementary Material 4: Observation schedule for family planning clinics

Supplementary Material 5: Observation of family planning clinic in medical schools for privacy and confidentiality

Supplementary Material 6: Interview of the service providers in family planning clinics in medical schools for family planning and abortion services

Supplementary Material 7: Contraceptive methods disbursed and procedures done and stock position of contraceptive methods in medical schools (average of last three months preceding data collections

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Author contributions

K.I. and M.G.: Co-first authors contributed in conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Supervision, Validation, Writing – review & editing, Provided final approval; N.S., K.K., S. P. and M.V. contributed in Data curation, Formal analysis, Project administration, Software, Writing – original draft, Writing – review & editing and provided final approvalR. S., M. R., V. S., N. A. and T. S contributed in methodology development, Project administration, Writing – review & editing; Provided intellectual inputs to improve quality of the manuscript and provided final approval, and P.G., N. G., R. P. K. G., H.G., I. B., M.V., S.A., R.A.,K.S., M.C., P.P., B.N., B.M., K.N., A.T., S.A., and S.P. contributed in data collection, Project implementation, Provided intellectual inputs to improve quality of the manuscript and provided final approval.

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Data availability

The de-anonymised data is available from the corresponding author- Madhu Gupta (madhugupta21@gmail.com) upon reasonable requests.

Declarations

Ethics approval and consent to participate

The study received ethical approval from the ethics committee of PGIMER (PGI/IEC/2018/001270). Prior permission was obtained from the Director of

Medical Education and Research of each respective state and Union Territory. Additionally, written permissions were obtained from the Directors and Controllers of all participating medical schools. Informed verbal consent was obtained from all the service providers and clients before interviews and observations. All methods were carried out in accordance with relevant guidelines and regulations.

Consent for publication
Not applicable.

Implications of the study
Provider bias, sterilisation as a precondition for provision of MTP, and reliance on spousal consent for uptake of contraceptive methods hindered women's autonomy and reproductive rights. Family planning service quality suffered from inconsistent use of the medical eligibility checklist. Patient overload and inadequate infrastructure compromised privacy and confidentiality. Despite trained faculty and available contraceptive methods, women's reproductive rights were not ensured completely.

Competing interests
The authors declare no competing interests.

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