

Challenges and Reforms in Midwifery and Nursing Regulatory Systems in India: Implications for Education and Practice

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Abstract

Background: Nursing regulation is poor and midwifery coexists with nursing in India, where 88% of midwifery and nursing education is provided by the private sector. The Indian health system faces major challenges for maternal health provision, with a 12% share of total maternal deaths globally, poor quality, indeterminate regulatory functions and lack of reforms.

Methods: We undertake a qualitative investigation to understand the experiences and perceptions of participants on midwifery and nursing regulatory systems, education and development in India. Thirty-four in-depth interviews were conducted with senior midwifery and nursing leaders representing administration, advocacy, education, regulation, research and service provision.

Results: There's a lack of importance accorded to midwifery roles within the nursing system. The councils and statutes do not adequately reflect midwifery practice, and are a barrier to good quality care provision. The lack of amendment of Acts, lack of representation of midwives and nurses in key governance positions in councils and committees have restrained and undermined leadership positions, which has also impaired the growth of the profession. The standards for education in private institutions appeared imprudent with lack of opportunities for practice and unfair assessment practices. Discrimination against midwifery and nursing students was rampant in the education system in public and private institutions, with limited opportunities for practice when compared to medical students.

Conclusions: The study concludes with a reform measure including a recommendation for implementing direct-entry midwifery education, empowering midwives and nurses with decision-making powers within health care and workforce governance.

Plain English Summary

Midwifery and nursing education, professionals and practice, are key areas of regulation for a well functioning workforce and health care service provision that is crucial to understand and yet understudied in India. Our qualitative study addresses this gap in literature from the experience and perspectives of midwifery and nursing leaders at the central level and in five states in India along with a secondary review of the respective acts in these states and at the centre. Nursing in India faces many challenges such as corruption in education and regulation; poor education in private sector; poor resources in public sector; lack of regulation of nursing professional and absence of proper standardization of care. A reform in regulation is expected to establish an independent professional midwifery with direct entry courses in India which is currently provided to some extent in each of the three entry level courses but none at par with the international standards of midwifery education or practice. The challenges these professions and the discrimination the professionals face are gender based and a result of medical domination that has also led to denoting these professions a secondary stature in the structure of health care delivery systems. There is tremendous scope for improvement for the central and state level regulatory bodies and their respective acts, some of which were formulated before independence. This will enable good quality education and service provision through regulated nursing and midwifery workforce in India.

1. Background

Midwives and nurses are integral to reproductive and maternal health care provision in India. A comprehensive and strong regulatory mechanism is therefore needed to regulate education, practice and to ensure competent nurses and midwives in the Indian health workforce. The International Confederation of Midwives (ICM) recommends six functions that regulatory bodies should maintain; setting the scope of practice, pre-registration of education, registration, relicensing and continuing competence, complaints and discipline, code of conduct and ethics ^[1]. The Indian Nursing Council (INC) and State Nursing Councils (SNC) play key roles in the regulation of nursing and midwifery education in India. They oversee registration, licensing, inspection and examination. However, there is duplication of these roles both at the national and the state levels ^[2].

In India, nurse-midwives become part of the health care workforce after completing 2-4 years of mandatory Pre Service Education (PSE) which aims to provide skill sets of both professions. Currently, India does not have a cadre of competent independent midwives. Midwifery education is provided both as a part of a diploma course called General Nursing and Midwifery (GNM) for three years and also as a part of a four year BSc nursing degree. The midwifery component in BSc nursing degree lasts approximately six months when compared to 18 months midwifery education after completing three years of a nursing degree in other countries ^[3]. There are elements of midwifery skills education in the Auxiliary Nursing and Midwifery (ANM) certificate course as well. The

curriculum of these three entry level courses of midwifery education are not comparable with the ICM recommended skill-set which [1]. Hence, India people graduating from the diploma and degree course can be addressed as nurses or nurse-midwives, but there is a lack of midwives in India as per ICM guidelines. The National Health Mission (NHM) of the Government of India (GOI) recently initiated efforts to formulate clear operational guidelines to implement midwifery training in India [4]. An existing diploma course for Nurse Practitioners in Midwifery (NPM) has been updated for this though it is not in line with the ICM recommendation for developing competent midwives. It is essential to understand India's midwifery education, regulation and practice capacities as there is evidence suggesting that 87% of maternal health care during childbirth can be managed effectively by professional midwives [5].

Midwives and nurses are recognized are often neglected and subjected to discrimination right from their PSE to all through their professional careers [6,7]. Indian nursing and midwifery education is faced with several challenges including resource constraints such as lack of teachers; a mismatch between theory and practice in learning; a lack of opportunities for practice; discrimination and stigma [2,8-10]. Around 88% of nursing education in India is provided by the private sector where the quality of education is reportedly poorer than in public institutions, especially in the resource-poor states in northern India [6]. The private share in nursing education has continued to grow in terms of the number of training institutions and recruitment quota, in response to the global demand of nurse-midwives making India rank second in terms of nurses outmigration [11]. The uneven distribution of nursing institutes is yet another challenge. The privatization of education has led to a skewed production of human resources for health (HRH) with six high HRH producing states of Andhra Pradesh, Karnataka, Kerala, Maharashtra, Pondicherry and Tamil Nadu, which represent 31% of the Indian population but have 63% of nursing and 58% of medical colleges compared to the eight low HRH producing states of Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Uttar Pradesh, Uttaranchal, Odisha and Rajasthan, which has 46% of the population but only 20% of nursing and 21% of medical colleges [6,12]. The training institutes are further skewed toward the urban areas within these states [6]. Regulatory mechanisms are reportedly relaxed to allow training in certain private institutes, despite capacity challenges [7].

The current midwifery and nursing regulatory structure of India also faces many challenges. It is dominated by medical representatives and provides little authority to nursing and midwifery regulators. The regulation of nurses and midwives' migration is cumbersome; the regulation of practice is weak, and there is a failure to improve the quality of education in private sectors [6,13-18]. Over the last few years, non government and international development organizations have coordinated efforts to improve pre-service and in-service education in India [18-19]. However, these efforts have not been extended to establishing and sustaining a strong regulatory structure. There have been some initiatives to understand the quality of nursing and midwifery education and services in India though the challenges in regulation remain unaddressed [6,10,16].

2. Methods

Our study investigates the regulatory system to understand its potential impact on nursing and midwifery education and development in India. The objectives of this research are threefold: (i) to document the regulatory system for nursing and midwifery in India and highlight its weaknesses; (ii) to understand the underlying gender and power based issues adding to the regulatory challenges of midwifery and nursing and (iii) to recommend reform measures for strengthening nursing and midwifery regulation and workforce governance in India.

We use qualitative methods to examine the perceptions and experiences of nurse-midwives in senior leadership roles regarding the regulatory systems of midwifery and nursing in India. The study participants were selected through purposive and snowball sampling in five states in India: Rajasthan, Odisha, Bihar, Madhya Pradesh and West Bengal and at the national level. The five states selected represent different cultural, social, economic and health contexts. All selected states, except West Bengal, are amongst the low HRH producing states, known for poor quality of midwifery and nursing education and face similar challenges. West Bengal is known for good nursing and midwifery governance and quality of education, especially in the public sector. The selection of leaders at the centre allows us to understand the larger context of health policy making and governance in India. The inclusion criteria for in depth interviews followed a strategy to select nursing and midwifery leaders who represent various domains of administration, advocacy, education, regulation and service provision in the selected states and at the centre. Some of the participants represented multiple domains. The paper presents a global perspective from nursing and midwifery leaders based in the United Kingdom and Switzerland. Switzerland is the hub of all the international development organizations including the World Health Organisation (WHO), that plays a key role in global nursing and midwifery governance. United Kingdom (UK) was selected so that the participants can reflect and share based on the successful model of midwifery education and regulation in the UK. The interviews with

participants from UK and Switzerland were mainly focussed on the regulation of midwifery given the absence of a midwifery cadre independent of nursing in India. Additionally, the study includes a review of the nursing acts from all the selected states and the INC act to understand the guiding documents for regulation in India.

2.1. Data collection and analysis

In-depth interviews were conducted between July 2018 and January 2019. The participants were informed about the purpose of the study over email or phone before seeking appointment for interviews. Forty three leaders were approached for data collection. Nine of them could not provide time for the interview or dropped out. All the interviews were conducted in person, except three which were done as a video call. The study instrument is a semi-structured guide with three sections: 1) background information; 2) participant's role and responsibilities and 3) nursing and midwifery regulation.

The interviews were conducted by the lead author, an experienced qualitative researcher with educational background in nursing, midwifery and with research experience on issues pertaining to nursing and midwifery in India. All participants were aware of the researcher's background, professional qualifications and the rationale of the study prior to the interviews. The interviews were carried out in English in most cases, or in Hindi and Bengali in a few states. The female lead researcher is fluent in these languages. Data were processed and analysed thematically using NVivo 12 software. Coding was applied simultaneously with data collection which helped to clarify emerging themes in subsequent interviews. The codebook consisted of apriori codes which were supplemented by deductive codes, as the analyses progressed.

2.2. Participant profile

The age of respondents varied from 46 to 83 years. All respondents were midwives and nurses except one who did not receive formal education in midwifery. Twenty-six participants completed their education in nursing and midwifery in India. Their qualification was the degree that combined nursing and midwifery curricula. Four out of the 34 participants were men, who were all interviewed in Rajasthan, where men are allowed to opt for midwifery and nursing education. All respondents held senior level positions. Two of them have retired from service. The total experience of the participants ranged between 24 to 60 years. Table 1 presents relevant demographic, qualifications and work profile related information of the participants.

Table 1
Participant profile

Indicator	No. of participants/ Range	Total responses (N)
Age Range		
40-60 years	18	30
61-80 years	11	30
>80 years	1	30
Gender		
Female	30	34
Male	4	34
Qualification		
RN , RM	32	33
RM	1	33
MSc Nursing and MPH	22	33
PhD	11	33
Experience (years)		
Urban Experience Range	5-46	17
Rural Experience Range	0-25	17
Total Experience Range	17-60	29

3. Results

The interviews focused on the quality of nursing and midwifery education, regulation, challenges of regulation in education and practice, and recommendations to improve regulation of nursing and midwifery education and service provision. The findings are presented in four sections: 1) regulatory system for midwifery and nursing; 2) weaknesses in the current regulatory system; 3) gender and power as factors influencing regulation; and 4) midwifery under nursing as a regulatory challenge, in India.

3.1. Regulatory system of midwifery and nursing

This section presents a review of the regulatory acts implemented in the selected states and centre (Table 2). All the acts are extracted from the respective council's websites.

Table 2
Nursing and midwifery Acts reviewed, by year of enactment

Name of the Act	Year of enactment
The Indian Nursing Council Act ^[20]	1947
The Bengal Nurses Act ^[21]	1934
The Bihar and Orissa Nurses Registration Act ^[22]	1935
The Central provinces Nurses Registration Act (Madhya Pradesh) ^[23]	1936
The Orissa Nurses and Midwives Registration Act ^[24]	1938
Rajasthan Nurses, Midwives, Health visitors and Auxiliary Nurse Midwives Registration Act ^[25]	1964

On review it was found that some state acts are older than the INC act of 1947. All the state acts are similar in content which includes the profile of members, key definitions, process of becoming a member, information for professional registration, re-registration and clauses under which a practitioner can lose registration. The profile of the governing body is not uniform, ranging from seven members in Odisha to fifteen in Bihar. Every council has a set number of members who are doctors and some members are non-nursing/ midwifery administrators. The ex-officio members, four to seven in every council, can be elected multiple times as long as they hold the position by virtue of which they have been elected. There is no system of direct application unless through nomination, followed by election. None of these Acts have been amended since they were introduced way back in the 1930's and 40's. Bihar shared a council with Odisha at the time of its creation (in 1935) but did not amend the Act even though soon after its creation Odisha started a separate council (1938).

The language of the Acts is not gender sensitive and all the Acts refer to the registrar as 'he' or 'his' even though historically the position of registrar in most nursing councils is held by women, including at present when four out of five SNC's registrars interviewed in this study are women. The curriculum is not part of the act. It is centrally designed and implemented with some variation in the states.

The content varies a little for some Acts. The Rajasthan Nurses, Midwives, Health visitors and Auxiliary Nurse Midwives Act of 1964 is the most detailed Act entrusting the power of council through eight activities, including grounds on which the state government has the right to dissolve the Council and the Act. The language of the RNC Act is comparatively gender sensitive. Odisha and Rajasthan's Act and Council include 'midwives' in the title. None of the other Acts mention anything about independent midwifery practice. Odisha is the only state that registers *dai's* (traditional birth attendants). The Central provinces Nurses Registration Acts of 1936, in Madhya Pradesh discourages private practice even though it does not mention what it means for nurses working in the private health care provision and education.

All six Acts regulate education and none of them mention regulating practice or maintaining and updating the knowledge and skills of practicing professionals. There are no separate Acts at the state or centre that regulates nursing and midwifery practice. The Acts also do not mention INC's role in supervising the SNCs. This could be because the state Acts, except Rajasthan, were formed before the INC Act of 1947 - although Rajasthan's Act also does not mention INC's role. INC's key activities are maintenance of registers for all nursing and midwifery courses, registration at the national level, licencing of nursing training institutes, setting the curriculum for every course and maintaining uniformity. The INC website has information on the National Registration Tracking System (NRTS), which was recently launched to maintain a database of nurse-midwives in the country from every state, to enable tracking and regulate placement. As of August 9th 2020, there are 9,90,524 professionals enrolled under NRTS (INC, 2020).

The council Acts do not provide any guidance on nurses' domestic or overseas migration clarifying the terms of registration while serving in a foreign country, practice in India on return, higher education in nursing and midwifery or other health-related education in other countries.

3.2. Structure and functioning of midwifery and nursing regulation

3.2.1. Weaknesses in the regulatory and governing bodies

The INC is the main body that regulates nursing and midwifery education in India. The SNCs manage regulation at the state level. Regulation of nursing and midwifery education covers certificate, diploma and degree courses in public and private sector. Every council has positions of President and Registrar as the key administrators. Routine administration is in the purview of the Registrar. One participant from at the centre objected to the processes and terms of reference of administrators at the councils.

"These days in nursing council a person can be President for life! The council seems to be happy with it... elections are conducted in every term but the leadership does not change. They can change that if they want to." (Centre)

"INC president has been in position for 15 years... One term of leadership at INC is 4 years." (Centre)

Most council participants mentioned a lack of human resources as a key challenge to managing the councils work such as admission, examination, inspection, registration and re-registration in each state. The role of the INC is different from the SNCs. The

INC sets the national curriculum, oversees registration, implements the NRTS and conducts inspections in all the states. Some of these services overlap, such as institutional inspections which are carried out both by the SNCs and the INC independently when starting and maintaining a new institution. The reason for this was not clearly explained by the participants. One respondent from Rajasthan commented that this duplication of activity was unnecessary and should be handled solely by the respective SNCs.

Workload challenges were repeatedly mentioned particularly because the number of training institutes increased rapidly. Table 3 shows the number of nursing and midwifery educational institutes in each study state (along with seats) and total institutions in India. Between 2005 to 2018, the total ANMTCs increased from 254 to 1564, the total GNMTCs from 979 to 2812 and the total colleges of nursing from 349 to 1761. Bihar has the lowest number of institutes and admission capacity in comparison to the rest, while Madhya Pradesh has the highest. Bihar has 8.6% of India's population but only 0.5% of total colleges of nursing. The capacity of bachelors degree in nursing education has increased four times and post graduation in nursing by eleven times in India between 2005 and 2018. This increase has been disproportionate. The number of institutes providing GNM education increased from 22 to 324 in Madhya Pradesh but remained low in Bihar (13 to 21) between 2005 to 2018. The range of 991 to 12,970 GNM places for admission is disproportionately high especially given that the population coverage is highest in Bihar followed by West Bengal, Madhya Pradesh, Rajasthan and Odisha. Bihar does not provide any higher education prospects for its graduating nurse-midwives in the state. Each of the states have between 20-100 seats for GNM and BSc Nursing per institute. Within the states, the number of training institutions are not proportionate with the state's population. There is no data available from the INC that disaggregates distribution of institutes and admission capacity by public and private sector.

Table 3
Nursing and midwifery training institutions in selected states (2018)

State	Year	BSc Nursing	MSc Nursing	General Nursing and Midwifery	Auxiliary Nursing and Midwifery	Population (2011 Census)
Bihar	2018	9	0	21	90	10,38,04,637
	2011	0	0	11	29	
	2005	0	0	13	25	
Madhya Pradesh	2018	140	50	324	71	7,25,97,565
	2011	101	29	135	82	
	2005	19	2	22	9	
Rajasthan	2018	169	26	164	12	6,86,21,012
	2011	149	5	176	11	
	2005	3	0	57	8	
Odisha	2018	29	11	78	127	4,19,47,358
	2011	16	5	48	67	
	2005	4	0	10	16	
West Bengal	2018	23	12	72	6	9,13,47,736
	2011	16	7	49	59	
	2005	2	2	28	20	
All India	2018	1,761	590	2,812	1,564	1,21,08,54,977
	2011	1,570	450	2,351	935	
	2005	349	54	979	254	

The regulatory challenges in education are different in public and the private institutions. Although the curriculum being taught is

uniform in every state, the respondents argued that quality of education is not the same in the public and private sector. Respondents from every state shared that regulation of education was comparatively poorer in private sector institutions.

“Practical experience (for students) is zero in private sector” (Bihar)

“Private sector regulation is poor. No one sees that.” (Bihar)

Health facilities have affiliations to medicine and nursing education institutes, from public and private. It is difficult for the hospital authority/ staff to ensure that every student receives required amount of practice as recommended for successful course completion. A respondent from Bihar shared from her experience of working in a government tertiary level teaching hospital.

“Head of the Department (doctor) says my medical students will practice first (in the labour room). The nursing (and midwifery) students observe cases but can only request to give them a chance to practice. 100% cases (births) are conducted by medicine students... the council inspected, yet did nothing to change this.” (Bihar)

Such issues were shared from every state except West Bengal. The most common challenge mentioned was private institute students not getting an opportunity for practical experience during pre-service education. Students often filled up their case books with fabricated cases as a way to pass the course. This practice goes unchecked, though well acknowledged. Even more alarming is the illegal procurement of fake certificates by untrained persons. To address this, the councils take precautions before registering candidates from other states. However, the Registrars do not have sufficient resources to tackle such challenges which represents a major barrier in councils' functioning.

The lack of practical exposure for students in private institutes leads to a lack of knowledge and skills in comparison to those from government-led institutes. This challenge is acknowledged in private hospitals. Most private hospitals have their own education institutes but reportedly they do not have confidence in their own students because of their lack of skills. A participant from Rajasthan reflected on the poor training quality of students from private institutes and acknowledged that the state council is aware of the problem.

“The (state) council knows about it and does nothing” (Rajasthan)

The participant further shared that students sometimes pay bribes to the professors after practical examination or even inside their answer sheets during examination for theory papers to score well when the scorer finds the bribe inside it. Many teachers succumb to this practice, but not all surrender to the pressure as mentioned by a participant.

“No one fails students... it is all hidden. Student goes to drop the examiner at the train station to pass on an envelop. I have never taken that envelop. I have heard 5000 rupees is minimum per student for BSc and GNM... Everyone wants to be an examiner for private institute, for that extra income and no one wants to go to government institutes cause government students wont pay to pass.” (Rajasthan)

Corruption is the underlying reason for such malpractice which is kept in place by promoting nurses who are party to it.

“When nurses raise their voice, government removes them from their position. They are not scared of us as we don't have any power. We are dominated from above. We know everything but can do nothing” (Rajasthan)

A participant from Madhya Pradesh commented on the issue of student's non-attendance. Instead of sitting through the classes, students work in smaller nursing homes as assistants for an extra income. These training centres are usually affiliated to big private hospitals, so in terms of requirement, their 'papers' are always complete which means the non attendance goes undocumented. Even though these nursing institutes undergo inspections from the SNC, INC and the state government, they often don't face any regulatory action. Figure 1 shows the current responsibilities of state and central council, along with the overlap in their role and the gaps in regulatory functions.

3.3. Gender and power influencing midwifery and nursing regulation

The states face some unique gender-based challenges. In a female dominated profession, the leadership is male dominated in India and Rajasthan. In Rajasthan, the curriculum is regulated under the leadership of a male Nursing Registrar and practical experience is overseen by a male nursing administrator from the state health ministry. Rajasthan and Madhya Pradesh are amongst the few states that allow male students to take up nursing and midwifery education. Although, Rajasthan historically had both men and women candidates in diploma and degree level courses, due to lesser girls opting to do nursing owing to professional stigma, the inability to ensure the required practical experience in midwifery for male candidates has been a persistent challenge. In some institutions the midwifery professor or clinical instructor is a man, yet there is a strong possibility that he has never assisted a single birth. The issue of the lack of practical midwifery education for male candidates has not been addressed. A participant from Rajasthan, who teaches midwifery, raised this issue faced during his own training.

"I asked them why are you giving us this training when you won't let us practice during the training. What is the point of doing this training?... They (regulatory bodies) are not even thinking in those lines." (Rajasthan)

The INC recommends for students to assist 25 births each in BSc Nursing and MSc Nursing in Obstetrics. A male participant who teaches midwifery assisted only five births including his BSc in Nursing and Masters in Obstetrics degrees, even though 650 hours of study is required in total for an MSc. Even getting a chance to assist those five births was fraught with difficulties involving persistent efforts to win the trust of the labour room's team of care providers.

"There is stigma for men to work in labour room. Families don't encourage it, so the scope is less." (Rajasthan)

"This gender related problem has existed for over 30 years but INC is not doing anything to address it... the state nursing councils can not do anything about this. Now INC is implementing an 18 months course in midwifery but not looking into the challenges of men in midwifery... INC needs to take a stand... States can not do anything. INC tells, we do. State council can write to INC, but they don't care about the quality of education". (Madhya Pradesh)

The nursing and midwifery leaders representing education, administration and service provision brought up similar issues regarding male students lacking practical midwifery exposure. However, the participants representing regulatory bodies shared no such concerns. West Bengal has recently started enrolling male candidates for nursing and midwifery education. The issue of gender is not just about getting a chance to practice midwifery. A participant mentioned that the apparent gender imbalance in the profession is also a reason for the lack of leadership for women in nursing and midwifery.

"People in West Bengal used to think men in nursing won't be accepted by society, but that was a myth. There are two colleges with 50 seats each for male candidates who are also learning midwifery. The 1st batch training is on and it is very exciting." (West Bengal)

The role of doctors, who are usually men, is explored in different ways. They are held responsible for the lack of female representation and growth of the profession. There is frustration about doctors holding key positions in nursing councils.

"Nursing association wants the nursing directorate to be separate so their demands can be addressed. Any demand from a nursing or midwifery association is usually shelved when a doctor policy-maker comes in the picture." (Rajasthan)

"The president of Bihar Nursing Council is a Doctor...there is a lot of politics in all of this. There is pressure from the (Health) Secretary as well." (Bihar)

An interesting rationale came from a participant in West Bengal on the lack of leadership quality in nurse-midwives. According to her, the issue is that *"lesser doctors are falling in love with nurses"* as more women are being trained as doctors. Given that more recently male doctors are getting married to female doctors, nurses seem to be falling further down in the hierarchy of healthcare. The position of nurses, therefore, diminishes in society because doctors do not consider them their equal anymore. The involvement of men in nursing is deemed to uplift the image of nursing in the country to reduce the gender based stigma.

"As women, we are ruled by our father, brother, husband and son at different stages of our life... It is our lack of confidence and attitude that only if men are there will we succeed. There is a dependence... we surrender too easily." (West Bengal)

3.4. Midwifery under nursing as a regulatory challenge

Participants were asked about their opinion on the midwives current role in India, which is not a direct entry education and is usually practiced on rotation with other nursing roles. Direct entry midwifery is a 3 years degree course recommended by ICM that provides a license of Registered Midwife (RM). Participants responded with mixed opinions on the requirement and future of midwifery in India as an independent profession. While most participants seemed to be in favour of independent midwifery, there were limited and unclear responses on the regulatory challenges it entails. A respondent from Odisha could relate to working independently in the periphery and yet working harder, as the best phase of her career.

"ANM is our independent midwifery practitioner who is assisting deliveries in rural areas as good as doctors are doing independently in the urban areas. Some ANM's conduct deliveries much better than doctors and are very famous for their work, people specially request them to assist with their delivery." (Rajasthan)

Medical domination is reported as a key barrier for independent midwifery practice as the respondent mentioned *"we can not work independently in the tertiary level as the (medical) professors are there"* or that *"we can not work without their permission"*. Multiple respondents mentioned not being 'allowed' to do much as a key issue in the tertiary level of care though they have been entrusted with larger responsibilities at the primary and secondary level.

"I have done spinal anaesthesia, caesarean section and abortion, under supervision. If a policy is made that we can work independently, it will be uplifting for the profession (of midwifery)." (Odisha)

"Independent midwifery is key to address the situation with disrespect and abuse during childbirth everywhere." (Bihar)

"Nurse and midwife should be separate cadres, like medicine. Rotation is not helping" (National)

Another participant mentioned the lack of a legal framework as a key challenge for independent midwifery in India. This is due to a lack of legal protection for midwifery practitioners, unlike with doctors. At the national level, participants felt that the INC should take charge of regulating nursing and midwifery services. Participants have reported these challenges from every state.

"If the INC is the (only) regulatory body (in the country) then that should look after practice. In the 10 years that I have been superintendent, no one has come to check the competency level of my nurses". (National)

" Nothing is happening in terms of nursing regulation. There is no regulation of service." (Bihar)

There are challenges of underfunding as well, which were identified by a participant from Switzerland.

"All of them are badly underfunded. INC has managed to get some funds but given the size of India, its peanuts. It would be effective if they had many more resources. They could really meet, coordinate, re-educate, train, get the evidence and really understand what's going on. Its sad that what's all happening at states is registering and re-registering." (Switzerland)

Respondents felt that the councils should work in favour of midwifery and protect midwives right to practice in an independent profession. The need for a midwifery Act was mentioned a few times, which could encompass the unique challenges that midwives face. A participant stated that a Nursing and Midwifery Practice Act of India is being drafted without any assurance of when it will be enacted. Meanwhile another participant commented that the lack of a midwifery model of care is due to the vested interests of national leaders *"... they do not want independent midwifery in India"*. The independent status of midwifery is expected to bring in more recognition and a boost in salary as is seen in many other countries. A participant from the United Kingdom suggested a way forward,

"I think it would change the status if the public sees that this is a midwife, this is her level of skills. Someone who practices independently, not dependent on doctor. Its straightforward. It automatically shifts the status of the profession. It is fundamental to have that independent status. I know its not easy to organize and make happen. But it's the way forward... Changes in policies will of course support the midwives but also part of what's needed is to get midwifery leaders in the profession who sit there at those tables. There are policies being made about midwifery and maternity care without them at the table. We have got to get ourselves at those top tables... There is strong evidence on midwifery with the lancet series. Its doesn't happen overnight." (United Kingdom)

4. Discussion

The ICM identifies Education, Regulation and Association (ERA) as the three pillars for development and practice of midwifery^[26]. The nursing and midwifery workforce in India faces many challenges in each of these three areas. These three pillars often do not work together for the development of nursing and midwifery in India. The challenges include poor quality of education stemming from a weak regulatory structure that needs to adapt to changes over time. The lack of leadership role and decision-making power for nurse-midwives' further weakens the governance of these professions dominated by doctors^[6,17,36]. This is recommended by the majority of participants.

India does not have an independent midwifery workforce or direct entry midwifery education yet. Hence, regulation is currently targeted at nurses who are playing a dual role of nurse and midwife. As more evidence is generated on the advantages of midwifery for maternal and neonatal health^[26], it becomes important for the Council to make legitimate efforts to start direct entry midwifery education that will create a cadre of midwives independent of their nursing role. The INC's role will be fundamental in formulating the regulatory structure. This needs to be supported by the respective SNCs in generating evidence and ensuring that culturally appropriate changes are made. This could be done as an addition to the existing INC and the SNCs with appropriate amendments to the current acts, or by creating a separate midwifery council with a midwifery act.

The Acts in the five states and the INC Act have not been amended for decades, some since independence and before that. A study reviewed the content of the INC act against 21 elements recommended in the International Council of Nursing's (ICN) global standards and found that it addresses only 15 of the stated elements. An amendment of the Act should inform about all the general, structural, functional elements. The current Act is mainly educational and lacks many functional elements such as continuing training required, under education and training; code or standards or conduct/ ethics, disciplinary procedures under fitness to practice; established process under appeals; offences/ penalties listed under offences; and funding of council^[27]. The Acts also need to include key definitions such as nurse, nursing, midwife, midwifery, scope of practice and specific scope of practice^[27]. This was not an issue identified by the respondents. Interviewing leaders from different aspects of nursing and midwifery governance helped identify many other challenges. The increasing workload was frequently mentioned by the participants representing regulatory bodies which is a challenge reported in other countries as well^[28]. The participants did not mention gender-based discrimination in education, partial treatment of medical students in comparison to nursing and midwifery students and the powerlessness in nursing, midwifery and health policy making. The doctor dominance and political nature of regulation was reported with caution. All these challenges and more, including lack of leadership qualities in the regulatory bodies, were raised by nursing and midwifery leaders representing education, service provision, association and administration. Respondents urged the need for more transparency and inclusivity in the processes of INC and SNCs. This is essential to ensure accountability^[1,17]. The participants felt that a change in leadership at INC might improve regulation and that the key position should not be stagnant.

The regulation of private education is particularly concerning, given 88% of India's nursing education is being imparted in the private sector^[6]. This creates more avenues for corruption^[17]. Other issues including non-attendance of students, working in the nursing homes during pre-service education, lack of qualified teachers, less opportunities to practice and illegally practicing with no formal qualification have been reported, which should be addressed by regulatory bodies.

These interviews and evidence reported elsewhere reinforce the urgent need to improve midwifery and nursing education^[26,29,37-38]. In the Indian context, shortcomings in regulation have persisted for decades^[6,13-16]. The participants of this study have clearly identified that key stakeholders have failed to take a gender sensitive approach. Nursing and midwifery needs a people centric approach to address the existing gender-related barriers. Gender-based discrimination begins with each nursing and midwifery student's education and extends to their clinical practice or teaching thereafter. When male candidates are given opportunities for graduation and post-graduation in midwifery (gynaecology and obstetrics) and all streams of nursing, the SNCs must ensure that they receive enough practical experience^[13-15]. This could also enable practical experience for all students regardless of their gender. Men and women in the profession have specific issues that need to be addressed in a way that ensures quality education, opportunities to practice and provide care in line with patients rights and choices. Nursing and midwifery being traditionally women dominated professions, adds to the gender based discrimination and stigma, which gets exacerbated because of facts such as that of nurse-midwives often coming from poor socio economic background and belonging to backward classes and castes, which has a relevant history behind it on how nursing began and progressed in India^[8-9,30]. Though it is established that these characteristics has

an impact on nurses and midwives education and practice but the extent of it alongside the practice of medicine, owing to this intersectionality based on their personal attributes, remains to be understood in the context of India^[31].

A key challenge is the discrimination between nursing-midwifery and medical students, as they practice in the same health care delivery system. This discrimination results in inadequate practical experience opportunities for nursing and midwifery students and establishes a hierarchy in the medical care system early on from pre-service education. This clearly implies the lack of attention given to nursing and midwifery education in comparison with medical education. This hierarchy is often gender-based and creates inequalities within the health care team by centralising decision-making power in the hands of the medical profession at every level of care provision^[32]. The powerlessness of nursing and midwifery leaders in health systems policy making, due to the doctor-centric nature of health policy making and regulation, has been a persistent challenge^[6,17].

The nursing councils do not play a role in regulation of practice, which is mainly managed by the state and central government bodies. Increasing the SNC's role in practice regulation will ensure quality and evidence-based nursing and midwifery care provision, which could be supervised by the INC to ensure uniformity^[1]. Regulation is divided between different bodies including INC, the SNCs, the directorates of medical education and universities. This segregated nature of regulation adds to the confusion and decreases the rigour when education and regulation is managed by so many different bodies, mostly without the involvement of nursing and midwifery representatives. It results in duplication of functions such as inspection; while other functions including the regulation of practice are completely ignored.

Literature suggests poor working condition and low remuneration as key drivers for nurses migration from India, which could be addressed by better regulation of practice. Nurse (midwife) migration is also an area that needs to be regulated, given India is a major supplier of nurses to the Middle-East and high-income countries, ranking second in outmigration after Philippines^[6,11,33,34]. Information about overseas migration and practice on return is provided in other country Acts^[28,35]. An understanding of the magnitude and reasons for nurse-migration will help to improve the quality of working conditions in India and decrease the workforce shortages by retaining more nurse-midwives.

The respondents interviewed in Switzerland and United Kingdom presented a global perception mentioning some key challenges that were otherwise missed. The lack of evidence-based education was mentioned by a participant who felt the INC had a role to lead by showing best examples and guiding evidence-based education and practice in the country. The global leaders interviews also highlighted the issue of underfunding for nursing and midwifery, from education to practice, and the development of professions and professionals.

Similar challenges as shown in this study have been reported about regulation of medical education, professionals and practice as well^[39]. Where a new National Medical Council (NMC) presents scope for improvement such as regulation of fees for medical education in private institutions^[39], which is an area of reform for nursing and midwifery education as well, along with regulation of salaries in the private sector. The regulation of midwifery, nursing and medical education, professional and practice are crucial for Universal Health Coverage (UHC). Figure 2 summarises areas and actions to reform midwifery and nursing, education and practice regulation in India along with the need for research in future. It presents overarching areas of reform such as governance, where the establishment of midwifery and nursing directorate will aid many of the reforms suggested in the figure. Four key reform measures are suggested for each of the areas. There are some aspects which need more research and understanding in India, which also have been shown in Figure 2, such as, gender-based challenges in nursing, midwifery and health policy making; challenges in private sector education, regulation and practice; scope for independent midwifery practice; development of a strong regulatory structure and implementation of innovative strategies in regulation to ensure good quality and respectful care provision.

5. Conclusion

Nurses-midwives are the primary health care providers in India. Regulatory failures leads to nurses and midwives graduating without sufficient knowledge and skills thereby putting people's life at risk. This is a serious issue because practice is unregulated, care providers are unsupervised and not updated timely as the standards of care gradually deteriorate. The health regulatory structures of the country, that includes the regulatory bodies of all health care related professions, have a major role to play in maintaining standards of education and practice to ensure good quality of health care to its people. This requires a team approach similar to how a team of care providers with different expertise come together to provide quality health services. The INC, the SNCs, the Indian

Medical Association (IMA), the directorates of medical education, public and private universities, nursing and midwifery associations and development organizations have a stake in health care regulation. These entities need to come together to understand the issues and work to address those challenges by creating a strong evidence based regulatory structure guided by midwifery and nursing leadership.

Abbreviations

ANM- Auxiliary Nurse Midwife

ANMTC- Auxiliary Nurse Midwifery Training Centre

GNM- General Nursing and Midwifery

GNMTC- General Nursing and Midwifery Training Centre

GOI- Government of India

HRH- Human Resources for Health

ICM- International Confederation of Midwives

ICN-International Council of Nurses

INC- Indian Nursing Council

NHM-National Health Mission

NPM-Nurse Practitioner in Midwifery

NRTS-National Registration Tracking System

PSE-Pre Service Education

SNC-State Nursing Council

WHO- World Health Organization

Declarations

Ethics Approval and Consent to participate

The study obtained formal ethical clearance from the Research Ethics Review Board of the Authors' institution (Reference No: 41164) prior to the start of the research. Respondents provided written consent to participate in the study. All respondents were provided with a participant's information sheet with details about the research study. The interviews were audio recorded with consent. To ensure confidentiality, study respondents were anonymised throughout the analysis and presentation of results.

Consent to publication

Not required.

Availability of data and material

The data collected and analysed for this study are available from the corresponding author on reasonable request.

Competing interests

None declared.

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Authors contributions

KM conceived the study and its design, collected the data and performed the data analysis and drafted the manuscript. SB and ZM reviewed the design and edited versions of the manuscript. All the authors have read and approved the final manuscript.

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References

1. International Confederation of Midwives. 2011. Global standards for midwifery regulation. Regulation.
2. Sheikh K, Raman VR, Mayra K, 2012. Nursing governance in Low and Middle Income Countries (LMICs): Literature Review. Public Health Foundation of India.
3. Sharma B, Johansson E, Prakasamma M, Mavalankar D, Christensson K. Midwifery scope of practice among staff nurses: A grounded theory study in Gujarat, India. *Midwifery*. 2013; 29. p. 628-636.
4. Government of India. Guidelines on midwifery services in India. 2018.
5. The State of the World's Midwifery. 2014
6. Rao M, Rao KD, Kumar A, Chatterjee M, Sundararaman T. Human resources for health in India. *The Lancet*. 2011; 377.
7. Reynolds J., Wisaijohn T., Pudpong N., et al. A literature review: the role of the private sector in the production of nurses in India, Kenya, South Africa and Thailand. *Human Resources for Health*. 2013; 11:14.
8. Mayra K. Docsplanation: A malady of the healthcare profession. *Economic and Political Weekly*. 2020a;55:10.
9. Mayra K. A starched cotton fluorescent yellow saree, khopa, belly button and safety pins: Decoding the dignified Indian nurse-midwife. *The Practicing Midwife Journal*. 2020b; 23:6.
10. Tiwari RR, SharmaK, ZodpeySP. Situational analysis of nursing education and work force in India. *Nursing Outlook*. 2013; p. 129-136.
11. Khaliq AA, Broyles RW, Mwachofi AK. Global nurse migration: Its impact on developing countries and prospects for future. *World Health and Population*. 2008;10:3.
12. Public Health Foundation of India. 2011. High level expert group report on Universal Health Coverage for India. Planning Commission of India.
13. ANSWERS, NHSRC., 2009. Nursing services in Bihar. Available at: <http://nhsrcindia.org/sites/default/files/Bihar.pdf>
14. ANSWERS, NHSRC., 2009. Nursing services in Orissa. Available at: <http://nhsrcindia.org/sites/default/files/Orissa.pdf>
15. ANSWERS, NHSRC., 2009. Nursing services in Rajasthan. Available at: <http://nhsrcindia.org/sites/default/files/Rajasthan.pdf>
16. Sharma B, Mavalankar DV, Kulkarni A, et al. Role of nursing councils in regulating nursing and midwifery education, training and practice in India. *Midwifery and maternal health in India: Situation analysis and lessons from the field*. p. 14-30.
17. Putturaj M, Prashanth NS. Enhancing the autonomy of Indian nurses. *Indian Journal of Medical Ethics*. 2017; 2:4.
18. Nair S, Rajan S I. Nursing education in India: Changing facets and emerging trends. *Economic and Political Weekly*. 2017; 52: 24.

19. Government of India. 2015. DAKSHATA: Empowering providers for improved MNH care during institutional deliveries.
20. Indian Nursing Council. 1947. The Indian Nursing Council Act. Act 48 of 1947.
21. Government of Bengal. 1934. The Bengal Nurses Act. Act X of 1934.
22. The Bihar and Orissa Nurses Registration Act 1935. Act 1 of 1935.
23. Government of the central provinces and bear medical department. 1941. The Central Provinces Nurses Registration Act. (XXIII of 1941).
24. Authority of the Orissa Nurses and Midwives Council. 1940. Manual of the Orissa nurses and midwives' council.
25. Rajasthan Nurses, Midwives, Health Visitors and Auxiliary Nurse-Midwives Registration Act. 1964.
26. Lopes CL, Nove A, Hoop-Bender P, et al. A descriptive analysis of midwifery education, regulation and association in 73 countries: the baseline for a post 2015 pathway. *Human Resources for Health*. 2016;14:37.
27. Elison NK, Verani AR, McCarthy C. National nursing and midwifery legislation in countries of South-East Asia with high HIV burdens. *WHO South East Asia Journal of Public Health*. 2015; 4:102. p-12-19.
28. McCarthy CF, Voss J, Salmon M, E, Gross MJ, Kelly AM, Riley LP. Nursing and midwifery regulatory reform in east, central and southern Africa: a survey of key stakeholders. *Human Resources for Health*. 2013; 11: 29.
29. , NHSRC., 2017. Nursing policies, reforms, and governance structures. Analysis across five states in India.
30. Ray P. Care (Un)skilled: fragmented markets and nursing labour, contemporary Kolkata. *Land, Labour and Livelihoods: Indian women's perspectives*. Ed. Fernandez B, Gopal M, Ruthven O. 2016. p. 239-260.
31. Cehat, AMCHSS. Gender in medical education. 2002.
32. Philby A, McConville F, Portella A. What prevents quality midwifery care? A systematic mapping of barriers in Low and Middle Income Countries from the provider perspective. *PloS One*. 2016;11:5.
33. Khadria B. International nurse recruitment in India. *Health research and educational trust*. 2007; 42:3.
34. Wells M. The experiences of Indian nurses in America. *PhD Dissertation*. Seton Hall University. 2013.
35. Health Professions Regulatory Act, 2013. Ghana Nursing and Midwifery Council (Part III). pp 28-37.
36. Boylan J, Dacre J, Gordon H. Addressing women's under-representation in medical leadership. *The Lancet*. 2019;393.
37. Raman SP, Mavalankar DV, Kulkarni A, Upadhyay M, Deodhar A. Historical perspective of nursing and midwifery: training, education and practice in India. In: Visaria L. editor. *Midwifery and maternal health in India: Situation analysis and lessons from the field*. Indian Institute of Management; 2010.
38. Sharma B, Hildingsson I, Johansson E, Prakasamma M, Ramani K V, Christensson K. Do the pre service education programmes for midwives in India prepare confident 'registered midwives'? A survey from India. *Global Health Action*. 2015; 8.
39. Keshri VR, Sriram V, Baru R. Reforming the regulation of medical education, professionals and practice in India. *BMJ Global Health*. 2020; 5.

Figures

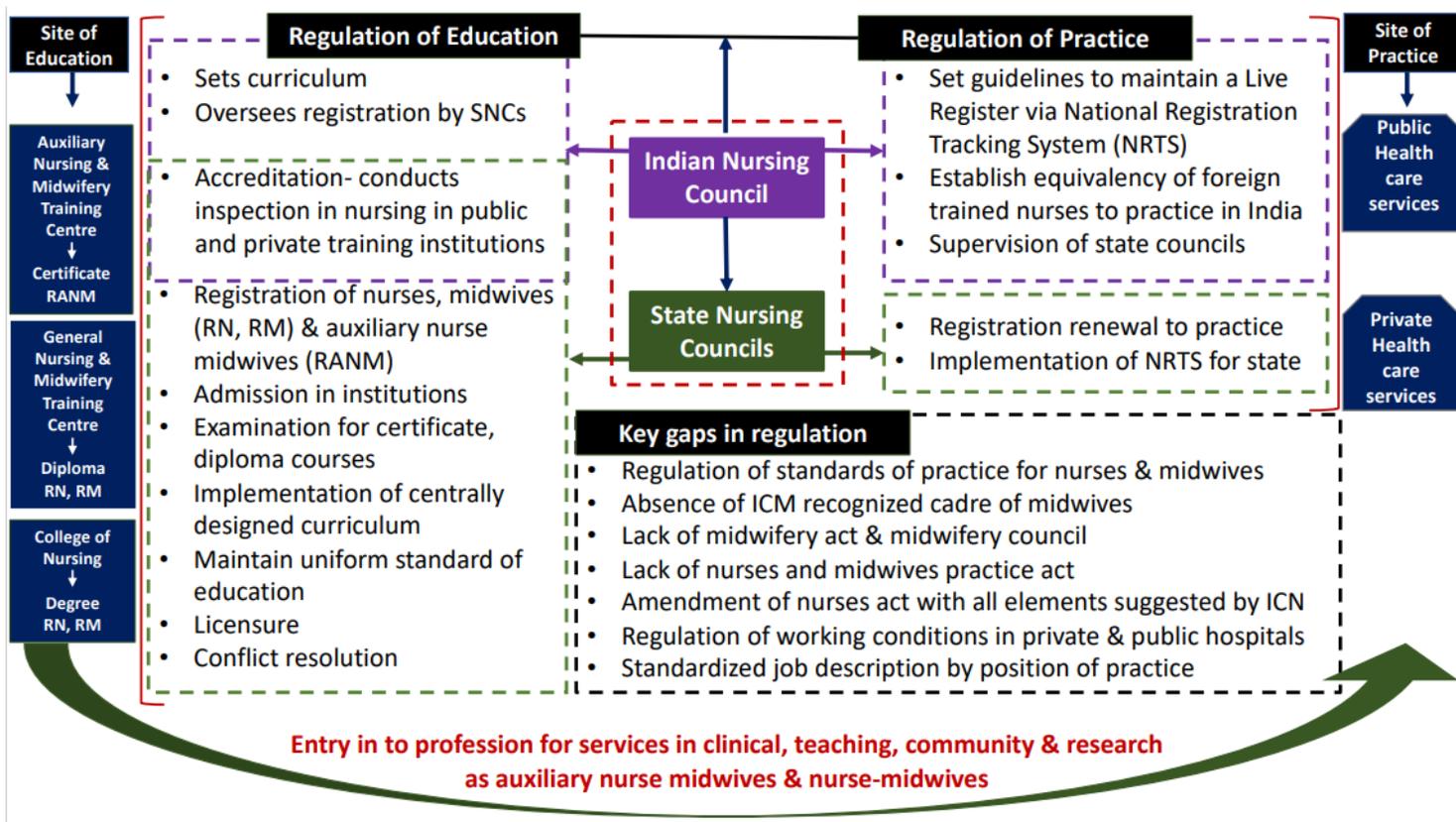


Figure 1

INC and SNC's role and gaps in regulation of nursing & midwifery in India (authors own)

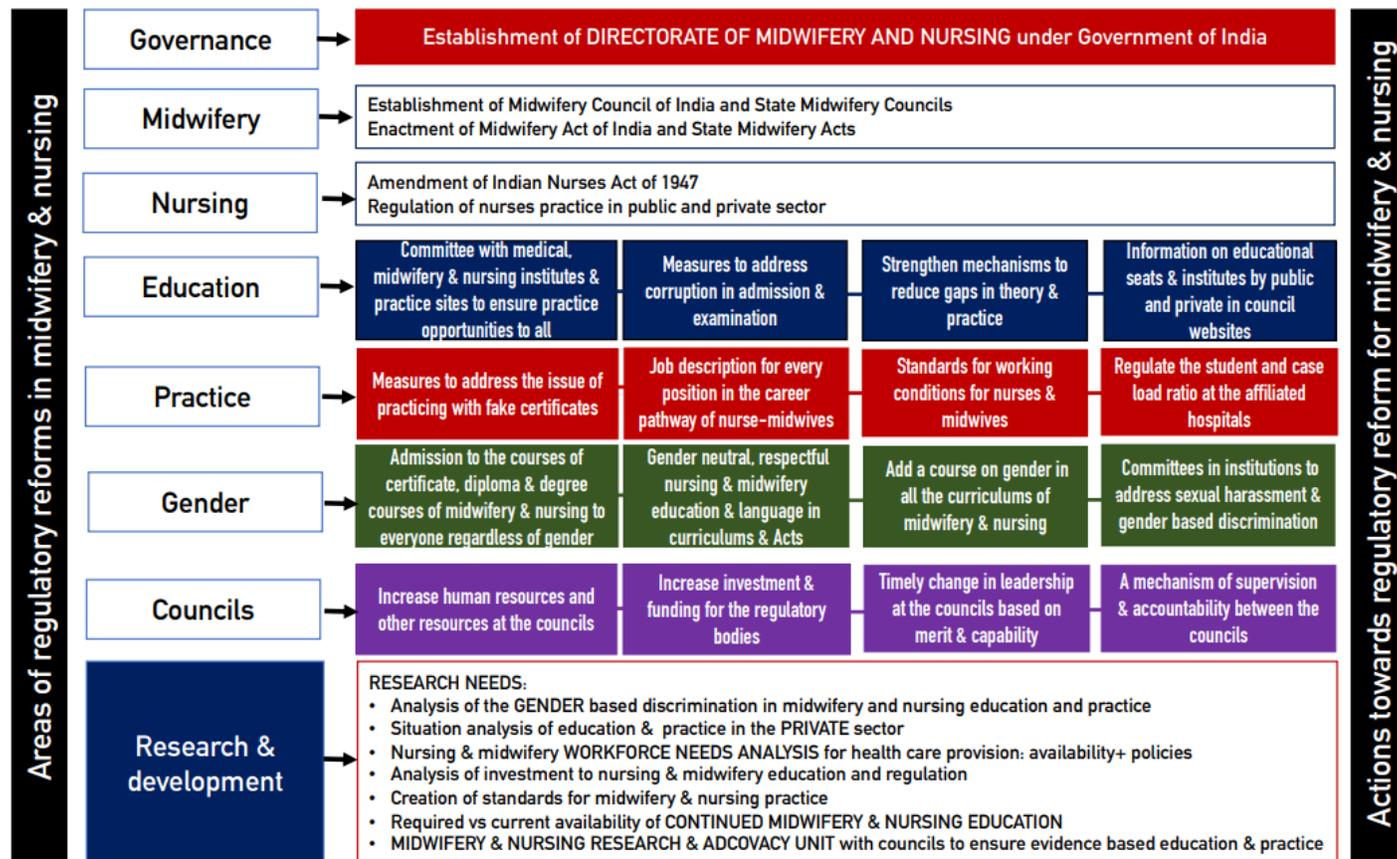


Figure 2

Supplementary Files

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