

PARTICIPATION OF WOMEN IN MEDICAL EDUCATION PROGRAM IN INDIA

Abstract

Women are 50% of humanity. Medicine is a particularly important occupation for women to enter. Women have always played a pivotal role in the health sector from health of the family to the health of the nation. Historically, women have also been the primary health care providers and health decision-makers for their families. Nearly two-thirds of women polled in a recent national survey indicated that they alone were responsible for health care decisions within their family. Women have played a significant role in their communities as doctors, nurses, midwives, patient advocates, and public health experts. In medical education only, the participation of men is not enough, women's participation is equally important. Because inclusion of women medicine in for women in medical science is fundamental to address emerging gender gaps in medical science. This study aims to examine the position of women in different medical education programs in India through the Annual Report of the All-India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Government of India, from 2013-14 to 2019-2020. This study was qualitative and documentary in nature. Results showed that women enrolled more in B.Sc. nursing and lesser recruitment in postgraduate courses. The study concludes that the participation of women in medical education plays a vital role. The study suggests remedial measures to overcome constraints faced by females in pursuing medical education.

Keywords: Medical Education, Women, Participation, India, Enrolment.

INTRODUCTION:

Education plays an essential role in national growth and development, as well as for a country's progress and wealth. The development and competitiveness of a village, state, or nation depends on efficiently and effectively utilizing its resources. Human talent is a critical resource and women are half of that resource. Globalization has dramatically changed the conditions of women, especially in high-growth countries like India. Economy provided to women at large to partake in the development of the country (**Khattar, 2019**). In recent years medical profession has undergone major changes in both scientific and human terms. For example, although Western and contemporary scientific traditions identified the figure of

doctor with the figure of male, today a large majority of those working in the profession are female (**Bhadra, 2011**). The Medical Profession had a measly representation by women during the time when India gained independence in 1947 (**Khattar, 2019**). Indian societal thinking which earlier was not ready to accept women as part of the medical profession. This unfortunately translated into women folk staying away from hospitals as many were not prepared to be treated by male doctors (**Khattar, 2019**). In India, the profession of doctor has always enjoyed a sense of dignity. Every parent wanted their wards to either join professional colleges of engineering or medicine (**Latham, 2002**). The enrolment in medical colleges at present has achieved close to gender parity in present times (**Khattar, 2019**). However, challenges remain for women's representation in all disciplines mainly because of the timing of professional work and other reasons (**Bhadra, 2011**). The most important analyses of women in Indian society have explored women's position in several ways. Education is a fundamental human right and it is necessary, irrespective of gender, to achieve the goal of basic education for all. There is limited representation of women in many sectors of Indian society (**Parker, 2015**). The full participation of women as healthcare providers is recognized globally as critical to favorable outcomes at all levels, including the healthcare system, to achieving universal health coverage and sustainable development goals (SDGs) by 2030 (**Yaz & Muntaner, 2021**). In India the situation of women in Medical science is very small. According to recent statistics, 64.1% of physicians are male and only 35.8% are female. As per the World Health Organization, the global health sector has an impressive female workforce of 70%. So, equal rights and the inclusion of women medicine in medical science is fundamental to address emerging gender gaps in medical science. Thus, the present study explored the position of women in different medical education programs in India through the Annual Report of the All-India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Government of India, from 2013-14 to 2019-2020.

REVIEW OF RELATED LITERATURE:

The historical, social, educational, and professional participation of women is examined, and an analysis of data between 1950 and 1974 has been made to identify the changes in and possibilities for increasing participation of women doctors in India (**Abidi, 1988**). The result of empowerment reveals positivity in many aspects, but certain areas still need to improve. Further measures by the government and changes in societal patterns would be beneficial (**Khattar, 2019**). In India, the profession of doctor has always enjoyed a sense

of dignity. Every parent wanted their wards to either join professional colleges of engineering or medicine (**Latham 2002**). Women participation in higher education is increasing in almost all states. The women enrolment in higher education is also increasing. The rate of increase is slow in almost all the states of India (**Ghara, 2016**). There had been significant progress in the performance of women in higher education revealed from female literacy levels and its change over time. It was also observed that the gaps between male and female literacy rates are narrowing down (**Rana, 2022**).

From the literature review, it is evident that several studies have been done on the status of women in higher education but no one studied on especially, the status of women in research in medical education. This inspires the researcher to investigate the present study. Thus, the study will cover the aspects of the development of women's medical education in India, trends, and patterns in enrolment of women's participation in medical education in India.

RATIONALE OF THE STUDY:

- Women have played a significant role in their communities as doctors, nurses, midwives, patient advocates, and public health experts. However, only in the nineteenth century did women become licensed medical practitioners.
- Most feminists today see doctors as having a special relationship with women, through their control over biological reproduction and their role in mediating and transmitting ideas about women's biology. Male-dominated medicine, many feminists argue, is a key means for the social control of women. The overt exclusion of women from medicine is interpreted as part of this control. Many feminists have, therefore, seen medicine as a particularly important occupation for women to enter.
- Usually, women patients used to feel uncomfortable and embarrassed while being examined and treated by male doctors for women related diseases. Although female patients always expressed their gender preference, they had no other alternatives. But in India, women continue to be under represented in medical science. Through centuries of discrimination, women in medicine have persisted and are continuing.
- Primary health care relies heavily on the contributions of women, particularly in the area of health education, it raises their self-esteem and empowers them to serve their communities in a number of ways.

- Many females flock to this profession because of their inherent capacity to care for another human being. Nurses are often seen as caring, compassionate, patient, and understanding. And nursing thrives on a woman's instinct to nurture.
- Women carry the heaviest burden when it comes to family caretaking duties and also make up the vast majority of frontline health workers around the world.
- Women have made great strides in securing opportunities for education and employment. Health employment provides stable, remunerative careers that women (and men) can pursue while providing care to families and contributing to the physical and economic health of their communities.

From the above-mentioned ground, the study was justified.

OBJECTIVES:

Objectives of the study were-

1. To examine the enrolment status of women in Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) in India.
2. To examine the enrolment status of women in Doctor of Medicine (M.D.) in India.
3. To study the enrolment status of women in Master of Surgery (M.S.) in India.
4. To examine the enrolment status of women in Doctor of Medicine (D.M.) in India.
5. To examine the enrolment status of women in Nursing in India.
6. To study the enrolment status of women in Pharmacy in India.
7. To study the enrolment status of women in Homeopathic Medicine and Science in India.
8. To study the enrolment status of women in Ayurved in Medicine and Surgery in India.

DELIMITATION:

Delimitation of the study are-

- In this study, medical education levels consist of undergraduate and postgraduate levels.
- The study has been carried out on the basis of the enrolment of the academic session 2013-14 to 2019-2020 of the All-India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India.
- In this study, medical education programs consist of Bachelor of Homeopathic Medicine and Science (B.H.M.S), Masters of Homeopathic Medicine and Science

(M.H.M.S), Bachelor of Ayurved in Medicine and Surgery (B.A.M.S.), Master of Ayurved in Medicine and Surgery (M.A.M.S.), Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.), Bachelor of Pharmacy (B. Pharm.), Master of Pharmacy (M. Pharm.), Bachelor of Science in Nursing (B.Sc. -Nursing), Master of Science in Nursing (M.Sc. -Nursing), Doctor of Medicine in India (M.D.), Master of Surgery (M.S.), Doctor of Medicine in India (D.M.).

METHODOLOGY OF THE STUDY:

This is a documentary study. Qualitative data was collected and Qualitative data analysis was done. Data was collected from Annual Report of the All-India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Government of India, from 2013-14 to 2019-2020, and information was compiled from various books, Research Articles, Magazines, Research Journal, E-journal, Annual Report of UGC, Report of the Higher Education Department of West Bengal, and the Higher Education Department of India.

DATA ANALYSIS AND INTERPRETATION: Objective-wise

Analysis of objective 1: To examine the enrolment status of women in Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) in India.

Table 1: Enrolment status of women in Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	148367	71709	48.33	..	12166	5881	48.33	..	4099	1992	48.59	..	28000	13396	47.84	..
2014-15	166878	81092	48.59	0.26	14673	6850	46.68	-1.65	5381	2559	47.55	-1.04	37150	17894	48.16	0.32
2015-16	190145	93607	49.22	0.63	17860	8513	47.66	0.98	6571	3139	47.77	0.22	44580	21296	47.77	-0.39
2016-17	211366	105209	49.77	0.55	20034	9661	48.22	0.56	7798	3800	48.73	0.96	52548	25267	48.08	0.31
2017-18	241601	121628	50.34	0.57	22484	11072	49.24	1.02	9045	4457	49.20	0.47	60192	29126	48.38	0.3
2018-19	267197	137388	51.41	1.07	22991	11312	42.43	-6.81	10226	5014	49.03	-0.17	66899	32678	48.84	0.46
2019-20	287776	143328	49.80	-1.61	26658	12761	47.86	5.43	12552	6069	48.35	-0.68	81334	39398	48.43	-0.41

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

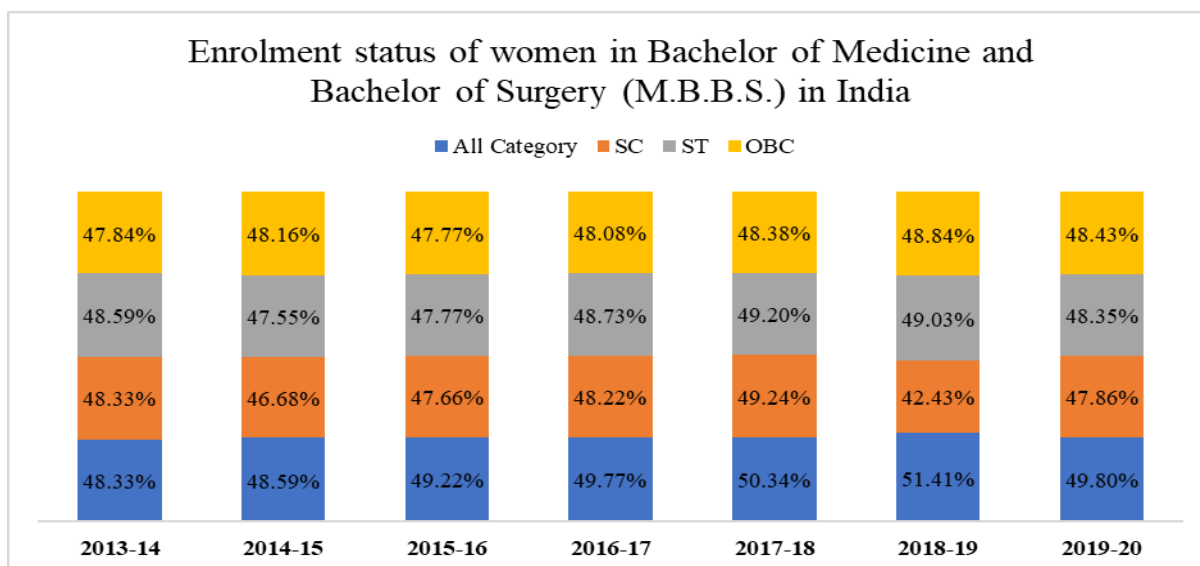


Figure 1: Enrolment status of women in Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) in India.

Interpretation: Table showed social category-wise enrolment status of females in Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) in the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 51.41% in the academic session of (2018-19) and highest enrolment growth rate was 1.07% in the academic session (2018-19) and lowest enrolment growth rate was -1.61% in the academic session (2019-20). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 49.24% in the academic session of (2017-18) and highest enrolment growth rate was 5.43% in the academic session (2019-20) and lowest enrolment growth rate was -6.81% in the academic session (2018-19). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 49.20% in the academic session of (2017-18) and highest enrolment growth rate was 0.96% in the academic session (2016-17) and lowest enrolment growth rate was -1.04% in the academic session (2014-15). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 48.84% in the academic session of (2018-19) and highest enrolment growth rate was 0.46% in the academic session (2018-19) and lowest enrolment growth rate was -0.41% in the academic session (2019-20).

Analysis of objective 2: To examine the enrolment status of women in Doctor of Medicine (M.D.) in India.

Table 2: Enrolment status of women in Doctor of Medicine (M.D.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	30462	11866	38.95	..	2184	962	44.04	..	1216	470	38.65	..	9944	4028	40.42	..
2014-15	31558	13206	41.84	2.89	2348	1101	46.89	2.85	1041	496	47.64	8.99	5337	2254	42.23	1.81
2015-16	38347	16378	42.70	0.86	2696	1269	47.06	0.17	1548	726	46.89	-0.75	6240	2710	43.42	1.19
2016-17	36376	16743	46.02	3.32	2740	1383	50.47	3.41	1264	631	49.92	0.03	6780	3147	46.41	2.99
2017-18	41119	19577	47.61	1.59	3243	1632	50.32	-0.15	1417	725	51.16	1.24	8145	3873	47.55	1.14
2018-19	45231	23101	51.07	3.46	3591	1863	51.87	1.55	1432	736	51.39	0.23	9222	4599	49.99	-6.56
2019-20	63652	30136	47.34	-3.73	4532	2337	51.56	-0.31	1947	989	50.79	-0.6	11218	6024	53.69	12.7

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

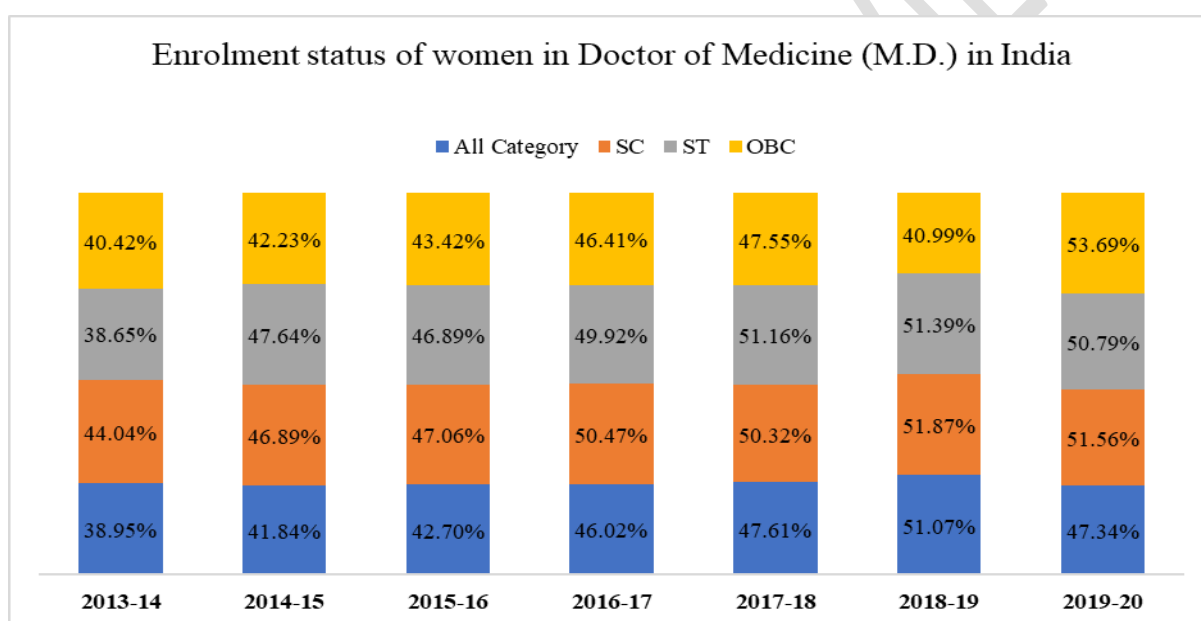


Figure 2: Enrolment status of women in Doctor of Medicine (M.D.) in India.

Interpretation: Table showed social category-wise enrolment status of females in Doctor of Medicine in India (M.D.) in the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 51.07% in the academic session of (2018-19) and highest enrolment growth rate was 3.46% in the academic session (2018-19) and lowest enrolment growth rate was -3.73% in the academic session (2019-20). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 51.87% in the academic session of (2018-19) and highest enrolment growth rate was 3.41% in the academic session (2016-17) and lowest enrolment growth rate was -0.31% in the academic session (2019-20). Enrolment status of ST category females is hopeful, highest enrolment of ST

category females was 51.39% in the academic session of (2018-19) and highest enrolment growth rate was 8.99% in the academic session (2014-15) and lowest enrolment growth rate was -0.75% in the academic session (2015-16). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 53.69% in the academic session of (2019-20) and highest enrolment growth rate was 12.7% in the academic session (2019-20) and lowest enrolment growth rate was -6.56% in the academic session (2018-19).

Analysis of objective 3: To study the enrolment status of women in Master of Surgery (M.S.) in India.

Table 3: Enrolment status of women in Master of Surgery (M.S.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	6675	2088	31.28	..	389	141	36.24	..	241	87	36.09	..	923	276	29.90	..
2014-15	7992	2577	32.24	0.96	568	190	33.45	-2.79	302	112	37.08	0.99	1207	382	31.64	1.74
2015-16	7210	3478	48.23	15.99	616	315	51.13	17.68	529	184	34.78	-2.3	1643	524	31.89	0.25
2016-17	9452	3427	36.25	-11.98	723	292	40.38	-10.75	309	113	37.54	2.76	1746	619	35.45	3.56
2017-18	10391	3914	37.66	1.41	759	293	38.60	-1.78	370	145	39.18	1.64	2077	791	38.08	2.63
2018-19	11961	4779	39.95	2.29	970	394	40.61	2.01	443	191	43.11	3.93	2515	1059	42.10	4.02
2019-20	22452	7674	34.17	-5.78	1184	487	41.13	0.52	563	227	40.31	-2.8	3169	1368	43.16	1.06

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

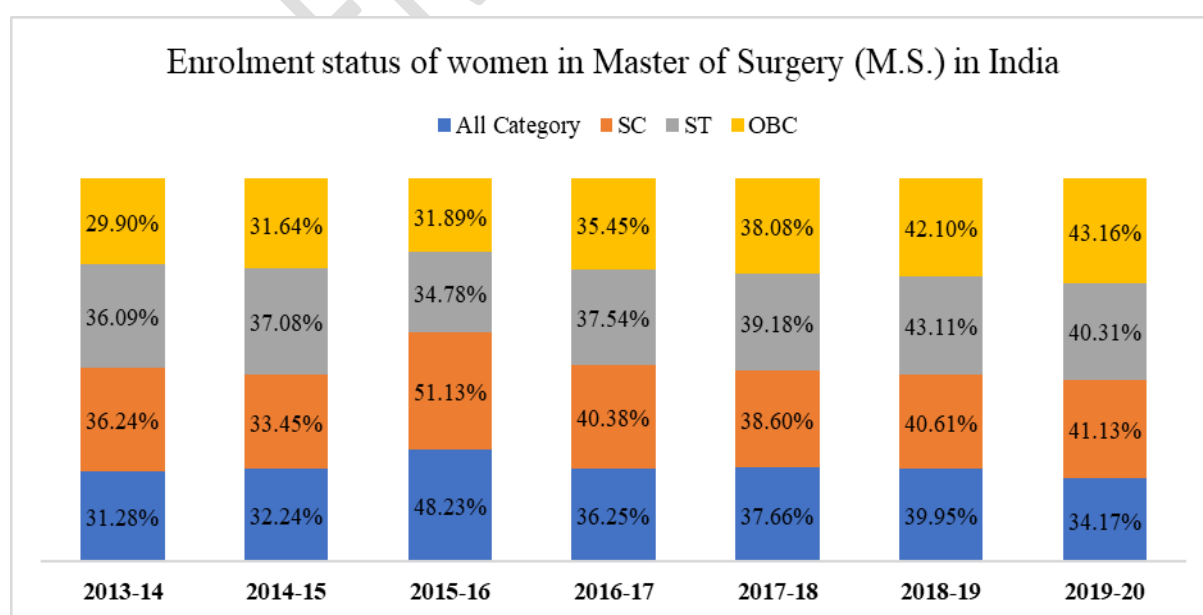


Figure 3: Enrolment status of women in Master of Surgery (M.S.) in India.

Interpretation: Table showed social category-wise enrolment status of females in Master of Surgery (M.S.) in the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 48.23% in the academic session of (2015-16) and highest enrolment growth rate was 15.99% in the academic session (2015-16) and lowest enrolment growth rate was -11.98% in the academic session (2016-17). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 51.13% in the academic session of (2015-16) and highest enrolment growth rate was 17.68% in the academic session (2015-16) and lowest enrolment growth rate was -10.75% in the academic session (2016-17). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 43.11% in the academic session of (2018-19) and highest enrolment growth rate was 3.93% in the academic session (2018-19) and lowest enrolment growth rate was -2.8% in the academic session (2019-20). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 43.16% in the academic session of (2019-20) and highest enrolment growth rate was 4.02% in the academic session (2018-19) and lowest enrolment growth rate was 0.25% in the academic session (2015-16).

Analysis of objective 4: To examine the enrolment status of women in Doctor of Medicine (D.M.) in India.

Table 4: Enrolment status of women in Doctor of Medicine (D.M.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	789	170	21.55	-	40	17	42.5	-	4	0	0.00	0.00	154	63	40.91	-
2014-15	709	109	15.37	-6.18	15	5	33.33	-9.17	1	0	0.00	0.00	36	3	8.33	-32.58
2015-16	655	110	16.89	1.52	8	3	37.5	4.17	0	0	0.00	0.00	21	9	42.86	34.53
2016-17	576	91	15.80	-1.09	2	1	50.00	12.5	1	0	0.00	0.00	38	14	36.84	-6.02
2017-18	773	134	17.11	1.31	1	1	100	50.00	0	0	0.00	0.00	34	9	26.47	-10.37
2018-19	429	88	20.51	3.4	5	1	20.00	-80.00	0	0	0.00	0.00	43	8	18.61	-7.86
2019-20	893	272	30.46	9.95	3	3	100	80.00	1	0	0.00	0.00	62	8	12.91	-5.7

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

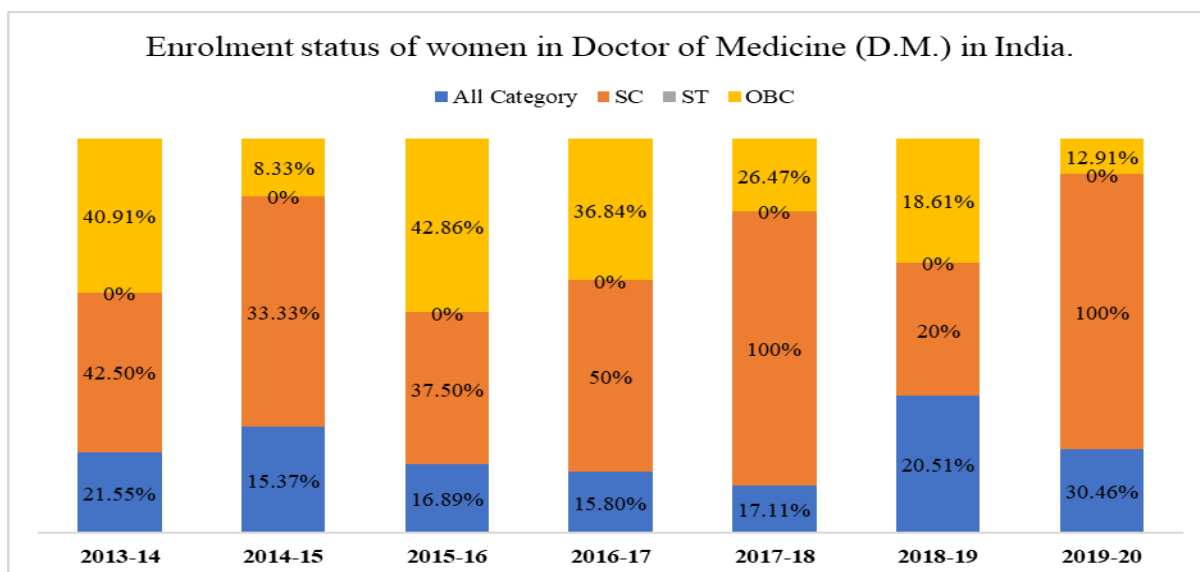


Figure 4: Enrolment status of women in Doctor of Medicine (D.M.) in India.

Interpretation: Table showed social category-wise enrolment status of females in Doctor of Medicine (D.M.) the last seven years (2013-14 to 2019-20) is not hopeful. Highest enrolment of all category females was 30.46 % in the academic session of (2019-20) and highest enrolment growth rate was 1.06 % in the academic session (2014-2015) and lowest enrolment growth rate was 9.95 % in the academic session (2019-20). Highest enrolment of SC category females was 50.00 % in the academic session of (2016-2017) and highest enrolment growth rate was 80.00 % in the academic session (2019-20) and lowest enrolment growth rate was -1.14 % in the academic session (2014-15). Enrolment of ST category females was 0.00% the last seven years (2013-14 to 2019-20). Highest enrolment of OBC category females was 42.86 % in the academic session of (2015-2016) and highest enrolment growth rate was 34.53 % in the academic session (2015-16) and lowest enrolment growth rate was -32.58 % in the academic session (2015-16).

Analysis of objective 5: To examine the enrolment status of women in Nursing in India.

Table 5a: Enrolment status of women in Bachelor of Science in Nursing (B.Sc. -Nursing) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	16469	138199	83.91	..	20203	17099	84.63	..	6521	5542	84.98	..	33206	26709	80.43	..
2014-15	177199	145314	82.00	-1.91	27789	22949	82.58	-2.05	9397	7770	82.68	-2.3	45725	35349	77.30	-3.13

2015-16	19165 1	156 328	47.56	- 34.44	31704	262 00	82.63	0.05	10462	870 5	83.20	0.52	52076	401 31	77.06	-0.24
2016-17	22040 6	174 434	79.14	31.58	38340	305 13	79.58	-3.05	13222	106 07	80.22	-2.98	65712	479 63	72.98	-4.08
2017-18	24088 2	190 345	79.02	-0.12	41882	332 91	79.48	-0.1	15135	123 21	81.40	1.18	74123	542 24	73.15	0.17
2018-19	25640 3	200 136	78.05	-1.15	44296	347 25	78.39	-1.09	16490	132 14	80.13	-1.27	81362	593 88	72.99	-0.16
2019-20	29016 5	223 567	77.04	-1.01	49427	385 83	78.06	-0.33	19739	158 52	80.30	0.17	91772	668 02	72.79	-0.2

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

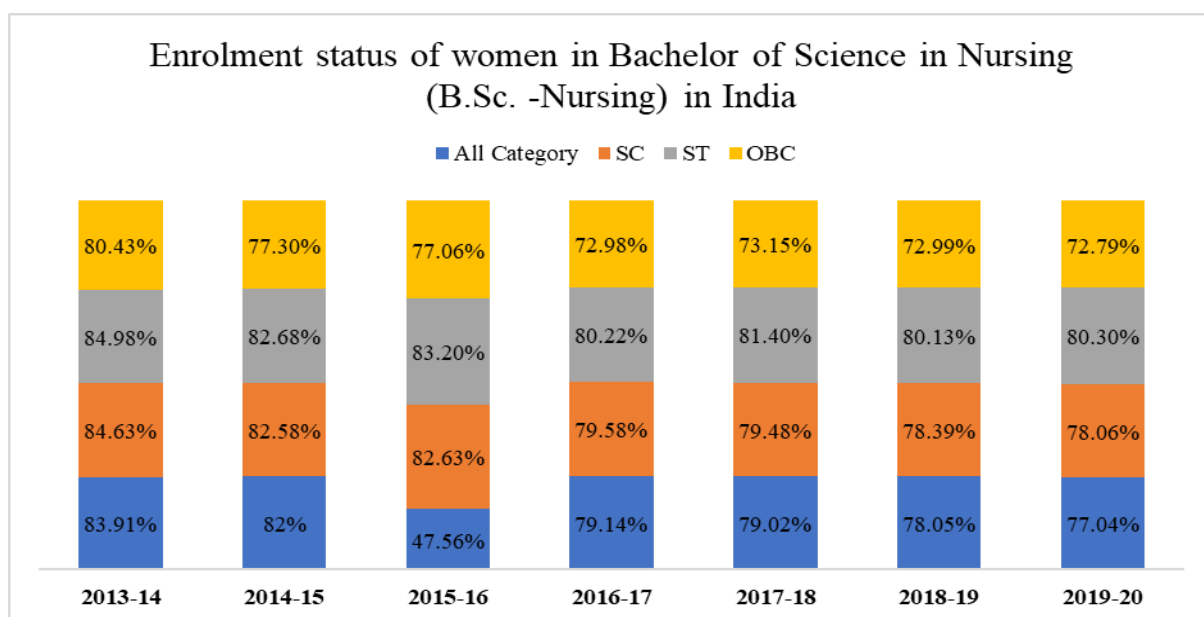


Figure 5a: Enrolment status of women in Bachelor of Science in Nursing (B.Sc. -Nursing) in India.

Interpretation: Table showed social category-wise enrolment status of females in Bachelor of Science in Nursing (B.Sc. -Nursing) the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 83.91% in the academic session of (2013-14) and highest enrolment growth rate was 31.58% in the academic session (2016-17) and lowest enrolment growth rate was -34.44% in the academic session (2015-16). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 84.63% in the academic session of (2013-14) and highest enrolment growth rate was 0.05% in the academic session (2015-16) and lowest enrolment growth rate was -3.05% in the academic session (2016-17). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 84.98% in the academic session of (2013-14) and highest enrolment growth rate was 1.18% in the academic session (2017-18) and lowest enrolment growth rate was -2.98% in the academic session (2016-17). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 80.43% in the academic session of

(2013-14) and highest enrolment growth rate was 0.17% in the academic session (2017-18) and lowest enrolment growth rate was -4.08% in the academic session (2016-17).

Table 5b: Enrolment status of women in Master of Science in Nursing (M.Sc. -Nursing) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	10294	8298	80.61	..	683	571	83.60	..	188	170	90.42	..	1541	1232	79.94	..
2014-15	10006	7800	77.95	-2.66	808	681	84.28	0.68	233	196	84.12	-6.3	1720	1354	78.72	-1.22
2015-16	8928	7273	81.46	3.51	903	755	83.61	-0.67	303	255	84.14	0.02	1862	1414	75.93	-2.79
2016-17	8975	7126	79.39	-2.07	1065	851	79.90	-3.71	385	309	80.25	-3.89	2193	1641	74.82	-1.11
2017-18	10176	8156	80.14	0.75	1347	1068	79.28	-0.62	401	327	81.54	1.29	2469	1887	76.42	1.6
2018-19	11915	9707	81.46	1.32	1679	1355	80.70	1.42	547	442	80.80	-0.74	2952	2338	79.20	2.78
2019-20	13229	10915	82.50	1.04	1811	1503	82.99	2.29	663	552	83.25	2.45	3460	2796	80.80	1.6

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

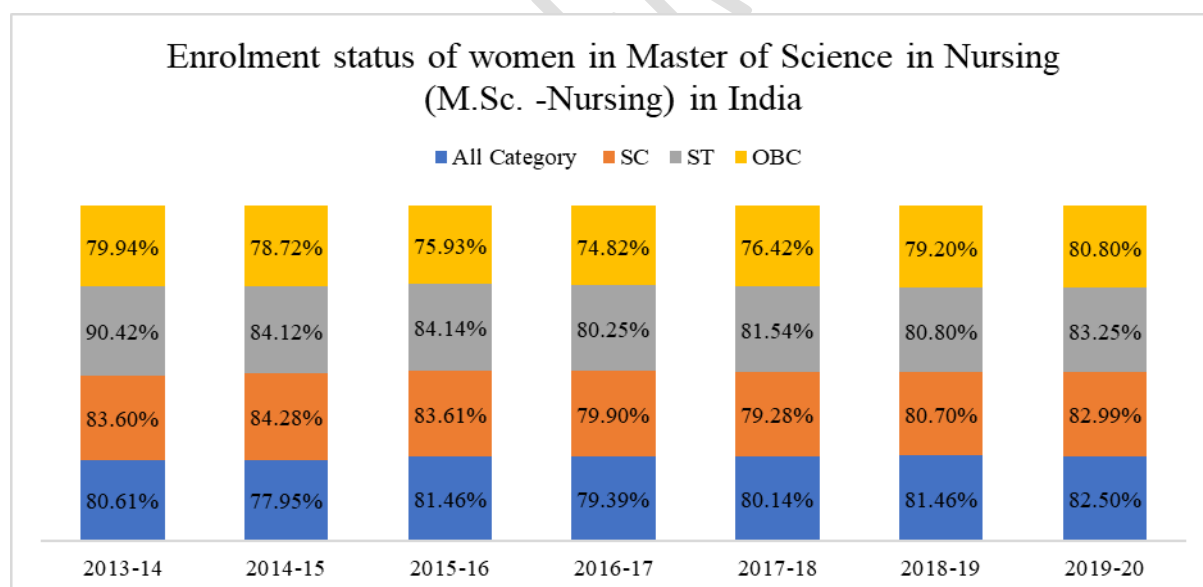


Figure 5b: Enrolment status of women in Master of Science in Nursing (M.Sc. -Nursing) in India.

Interpretation: Table showed social category-wise enrolment status of females in Master of Science in Nursing (M.Sc. -Nursing) the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 82.50% in the academic session of (2019-20)

and highest enrolment growth rate was 3.51% in the academic session (2015-16) and lowest enrolment growth rate was -2.66% in the academic session (2014-15). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 84.28% in the academic session of (2014-15) and highest enrolment growth rate was 2.29% in the academic session (2019-20) and lowest enrolment growth rate was -3.71% in the academic session (2016-17). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 90.42% in the academic session of (2013-14) and highest enrolment growth rate was 2.45% in the academic session (2019-20) and lowest enrolment growth rate was -6.3% in the academic session (2014-15). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 80.80% in the academic session of (2019-20) and highest enrolment growth rate was 2.78% in the academic session (2018-19) and lowest enrolment growth rate was -2.79% in the academic session (2015-16).

Analysis of objective 6: To study the enrolment status of women in Pharmacy in India.

Table 6a: Enrolment status of women in Bachelor of Pharmacy (B. Pharm.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	161703	72855	45.05	..	20306	9010	44.37	..	5640	2398	42.51	..	48167	21972	45.61	..
2014-15	179892	82335	45.76	0.71	24178	10761	44.50	0.13	6051	2598	42.93	0.42	58095	26747	46.04	0.43
2015-16	194264	89149	45.89	0.13	25140	11419	45.42	0.92	6379	2937	46.04	3.65	64833	29951	46.19	0.15
2016-17	205402	93229	45.38	-0.51	25597	11658	45.54	0.12	6661	3120	46.83	4.79	70691	32435	45.88	-0.31
2017-18	225457	101463	45.00	-0.38	26692	12495	46.81	1.27	6693	3252	48.58	1.75	79861	35916	44.97	-0.91
2018-19	246358	108509	44.04	-0.96	27710	13329	48.10	1.29	7300	3563	48.80	0.22	90135	39772	44.12	-0.85
2019-20	293822	123386	41.99	-2.05	31817	15094	47.44	0.66	8207	3883	47.31	-1.49	112980	47798	42.30	-1.82

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

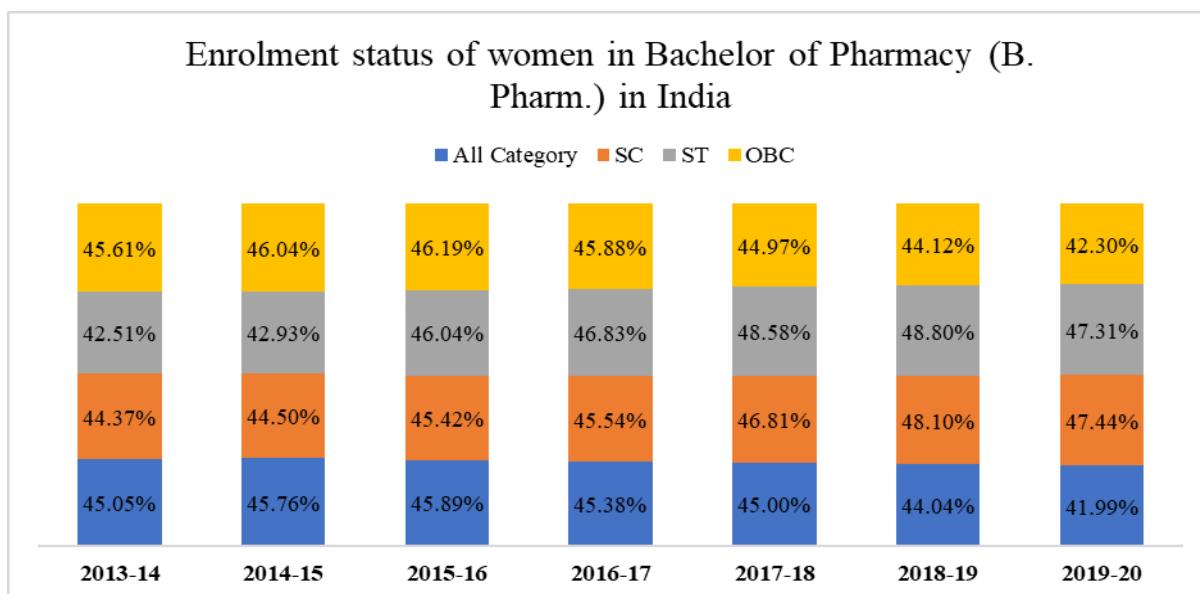


Figure 6a: Enrolment status of women in Bachelor of Pharmacy (B. Pharm.) in India.

Interpretation: Table showed social category-wise enrolment status of females in Bachelor of Pharmacy (B. Pharm.) the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 45.89% in the academic session of (2015-16) and highest enrolment growth rate was 0.71% in the academic session (2014-15) and lowest enrolment growth rate was -2.05% in the academic session (2019-20). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 48.10% in the academic session of (2018-19) and highest enrolment growth rate was 1.29% in the academic session (2018-19) and lowest enrolment growth rate was 0.12% in the academic session (2016-17). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 48.80% in the academic session of (2018-19) and highest enrolment growth rate was 4.79% in the academic session (2016-17) and lowest enrolment growth rate was -1.49% in the academic session (2019-20). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 46.19% in the academic session of (2015-16) and highest enrolment growth rate was 0.43% in the academic session (2014-15) and lowest enrolment growth rate was -1.82% in the academic session (2019-20).

Table 6b: Enrolment status of women in Master of Pharmacy (M. Pharm.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	35696	156	43.94	..	3925	179	45.75	..	1216	470	38.65	..	9944	402	40.50	..

2014-15	33897	159 66	47.10	3.16	4427	210 7	47.59	1.84	1380	567	41.08	2.43	10174	450 4	44.26	3.76
2015-16	33089	163 01	49.26	2.16	4904	243 9	49.73	2.14	1391	612	43.99	2.91	9810	461 1	47.00	2.74
2016-17	30825	166 49	54.01	4.75	4787	264 2	55.19	5.46	1336	613	45.88	1.89	9710	514 4	52.97	5.97
2017-18	30615	170 63	55.73	1.72	4542	258 1	56.82	1.63	1090	570	52.29	6.41	9921	536 9	54.11	1.14
2018-19	30796	170 80	55.46	-0.27	4257	238 7	56.07	-0.75	1031	554	53.73	1.44	10039	545 2	54.30	0.19
2019-20	34857	190 56	54.66	-0.8	4551	259 8	57.08	1.01	1148	594	51.74	-1.99	12135	646 9	53.30	-1

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

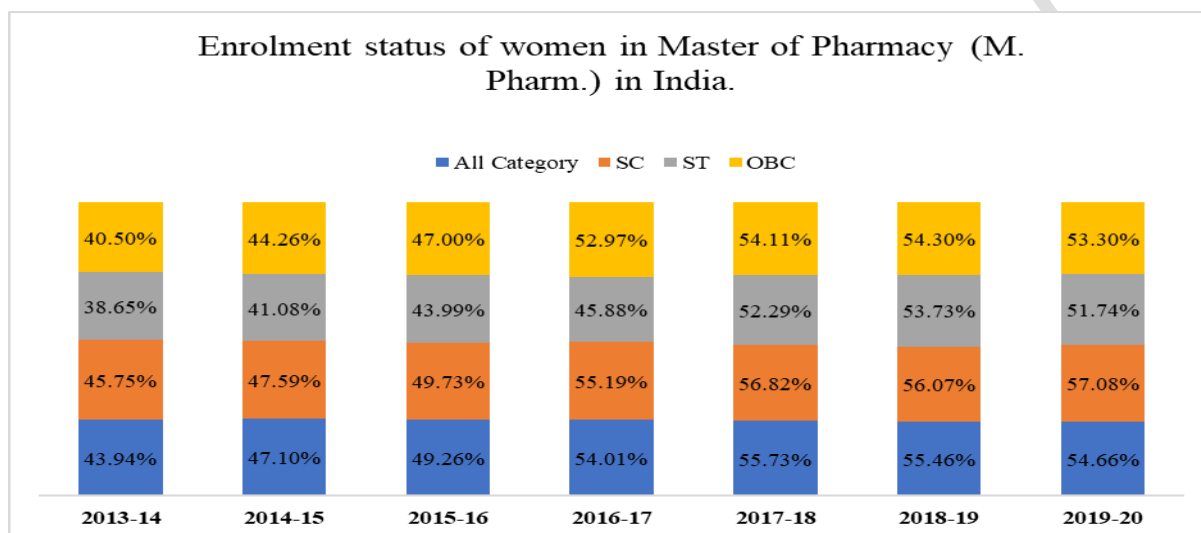


Figure 6b: Enrolment status of women in Master of Pharmacy (M. Pharm.) in India.

Interpretation: Table showed social category-wise enrolment status of females in Master of Pharmacy (M. Pharm.) the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 55.73% in the academic session of (2017-18) and highest enrolment growth rate was 4.75% in the academic session (2016-17) and lowest enrolment growth rate was -0.27% in the academic session (2018-19). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 57.08% in the academic session of (2019-20) and highest enrolment growth rate was 5.46% in the academic session (2016-17) and lowest enrolment growth rate was -0.75% in the academic session (2018-19). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 53.73% in the academic session of (2018-19) and highest enrolment growth rate was 6.41% in the academic session (2017-18) and lowest enrolment growth rate was -1.99% in the academic session (2019-20). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 54.30% in the academic session of

(2018-19) and highest enrolment growth rate was 5.97% in the academic session (2016-17) and lowest enrolment growth rate was -1% in the academic session (2019-20).

Analysis of objective 7: To study the enrolment status of women in Homeopathic Medicine and Science in India.

Table 7a: Enrolment status of women in Bachelor of Homeopathic Medicine and Science (B.H.M.S) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percentage (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percentage (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percentage (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percentage (%) of Female	Growth rate
2013-14	34729	21549	62.04	..	2911	1765	60.63	..	1643	996	60.62	..	8169	4993	61.12	..
2014-15	38503	24297	63.10	1.06	3392	2018	59.49	-1.14	1738	1076	61.91	1.29	9331	5739	61.50	0.38
2015-16	44901	28212	62.83	-0.27	3865	2331	60.31	0.82	2071	1295	62.53	0.62	10697	6594	61.64	0.14
2016-17	45441	28990	63.79	0.96	3867	2380	61.54	1.23	2115	1312	62.03	-0.5	11935	7469	62.58	0.94
2017-18	50485	31653	62.69	-1.1	4505	2779	61.68	0.14	2377	1440	60.58	-1.45	14343	8870	61.84	-0.74
2018-19	53282	33075	62.07	-0.62	4524	2765	61.11	-0.57	2151	1353	62.90	2.32	15013	9288	61.86	0.02
2019-20	57055	35290	61.85	-0.22	5495	3317	60.36	-0.75	2374	1415	59.60	-3.3	18694	10637	56.90	-4.96

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

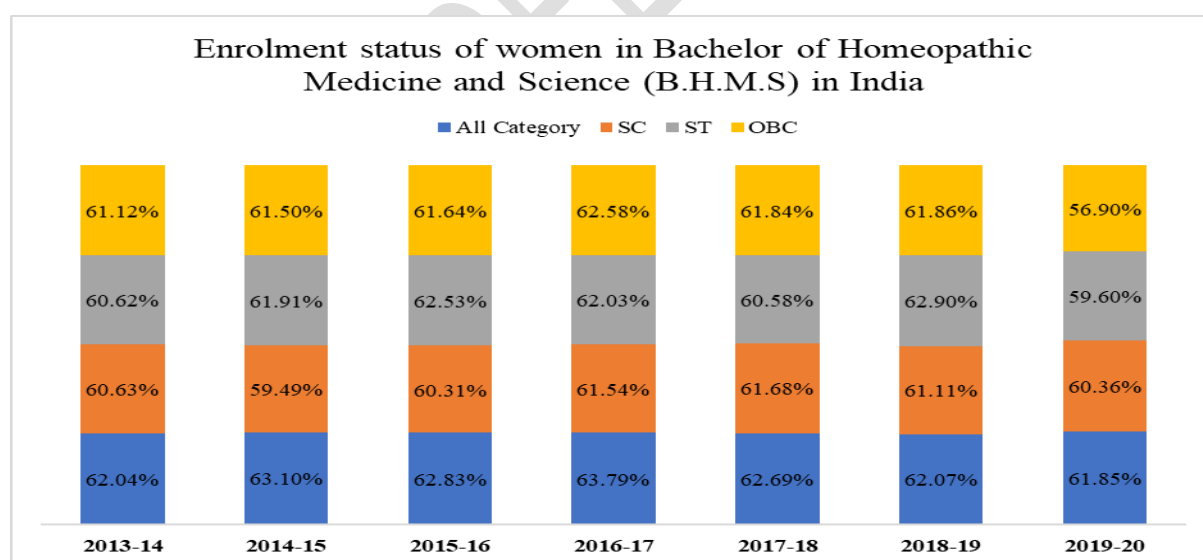


Figure 07a: Enrolment status of women in Bachelor of Homeopathic Medicine and Science (B.H.M.S) in India.

Interpretation: Table showed social category-wise enrolment status of females in Bachelor of Homeopathic Medicine and Science (B.H.M.S) in the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 63.79% in the academic

session of (2016-2017) and highest enrolment growth rate was 1.06 % in the academic session (2014-2015) and lowest enrolment growth rate was -1.1% in the academic session (2017-18). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 61.68 % in the academic session of (2017-2018) and highest enrolment growth rate was 1.23 % in the academic session (2016-17) and lowest enrolment growth rate was -1.14 % in the academic session (2014-15). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 62.90% in the academic session of (2018-2019) and highest enrolment growth rate was 2.32 % in the academic session (2018-19) and lowest enrolment growth rate was -3.3 % in the academic session (2019-20). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 62.58% in the academic session of (2016-2017) and highest enrolment growth rate was 0.94 % in the academic session (2016-17) and lowest enrolment growth rate was -4.96 % in the academic session (2019-20).

Table 7b: Enrolment status of women in Masters of Homeopathic Medicine and Science (M.H.M.S) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	145	94	64.82	..	2	0	00	..	0	0	00	..	0	0	00	..
2014-15	131	90	68.70	3.88	1	1	100	00	0	0	00	00	0	0	00	00
2015-16	126	89	70.63	1.93	1	1	100	00	0	0	00	00	1	1	100	100
2016-17	49	34	69.38	-1.25	6	6	100	00	1	1	100	100	8	3	37.5	-62.5
2017-18	61	42	68.85	-0.53	0	0	00	00	0	0	00	00	0	0	00	00
2018-19	71	46	64.78	-4.07	6	5	83.33	83.33	2	1	50	50	11	3	27.27	27.27
2019-20	91	62	68.13	3.35	8	7	87.5	4.17	2	1	50	00	10	3	30	2.73

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

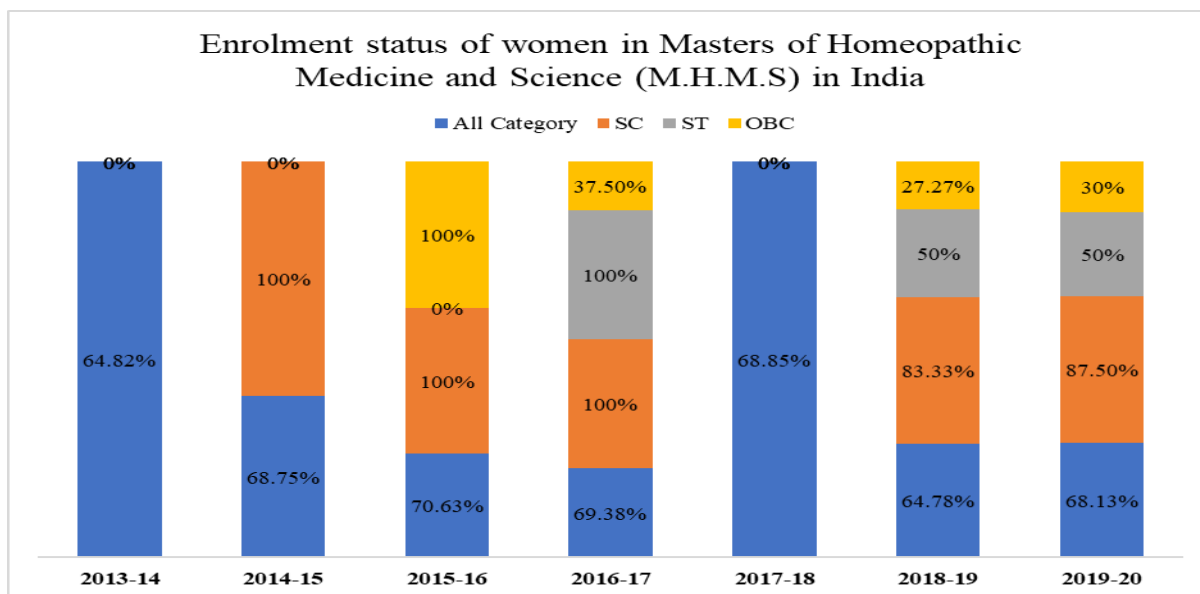


Figure 07b: Enrolment status of women in Masters of Homeopathic Medicine and Science (M.H.M.S) in India.

Interpretation: Table showed social category-wise enrolment status of females in Masters of Homeopathic Medicine and Science (M.H.M.S) in the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 70.63% in the academic session of (2015-16) and highest enrolment growth rate was 3.88% in the academic session (2014-2015) and lowest enrolment growth rate was -4.07% in the academic session (2018-19). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 87.5% in the academic session of (2019-20) and highest enrolment growth rate was 83.3% in the academic session (2018-19) and lowest enrolment growth rate was 0.00 % in the academic session (2013-14) (2017-18). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 100% in the academic session of (2016-17) and highest enrolment growth rate was 100% in the academic session (2016-17) and lowest enrolment growth rate was -3.3 % in the academic session (2014-15) (2015-16). (2017-18). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 100% in the academic session of (2015-16) and highest enrolment growth rate was 100 % in the academic session (2015-16) and lowest enrolment growth rate was -4.96 % in the academic session (2014-15). (2017-18).

Analysis of objective 8: To study the enrolment status of women in Ayurved in Medicine and Surgery in India.

Table 8a: Enrolment status of women in Bachelor of Ayurved in Medicine and Surgery (B.A.M.S.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	20800	11820	56.82	..	1619	922	56.94	..	707	401	56.71	..	4261	2549	59.82	..
2014-15	28256	16035	56.74	-0.08	2767	1621	58.58	1.64	926	533	57.55	0.84	5891	3364	57.10	-2.72
2015-16	35019	20163	57.57	0.83	3517	2101	59.73	1.15	999	581	58.15	0.6	8112	4753	58.59	1.49
2016-17	35641	21347	59.89	2.32	3305	1921	58.12	-1.61	1317	793	60.21	2.06	10460	6177	59.05	0.46
2017-18	42178	25141	59.60	-0.29	4002	2362	59.02	0.9	1539	928	60.29	0.08	12781	7533	58.93	-0.12
2018-19	45844	27289	59.52	-0.08	4129	2475	59.94	0.92	1706	1001	58.67	-1.62	13769	8166	59.30	0.37
2019-20	57156	33186	58.06	-1.46	5289	3108	58.76	-1.18	2374	1415	59.60	0.93	18694	10637	56.90	-2.4

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

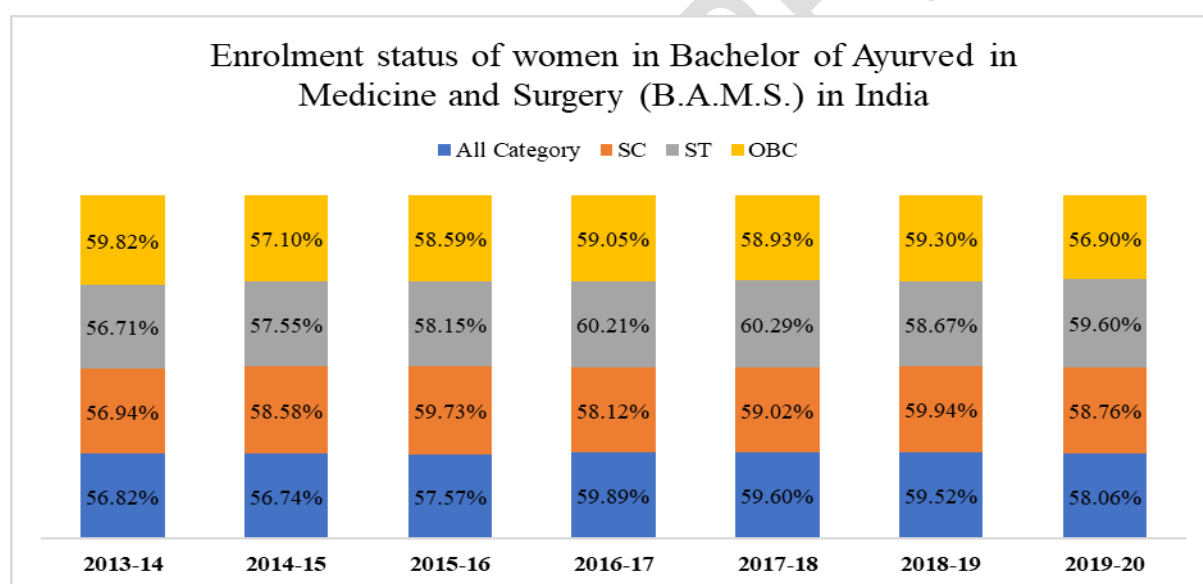


Figure 8a: Enrolment status of women in Bachelor of Ayurved in Medicine and Surgery (B.A.M.S.) in India.

Interpretation: Table showed social category-wise enrolment status of females in Bachelor of Ayurved in Medicine and Surgery (B.A.M.S.) in the last seven years (2013-14 to 2019-20) is hopeful. Highest enrolment of all category females was 59.89% in the academic session of (2016-17) and highest enrolment growth rate was 2.32% in the academic session (2016-17) and lowest enrolment growth rate was -1.46% in the academic session (2019-20). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 59.94 % in the academic session of (2018-19) and highest enrolment growth rate was 1.64%

in the academic session (2014-15) and lowest enrolment growth rate was -1.61% in the academic session (2016-17). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 60.29% in the academic session of (2017-18) and highest enrolment growth rate was 2.06% in the academic session (2016-17) and lowest enrolment growth rate was -1.62 % in the academic session (2018-19). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 59.82% in the academic session of (2013-14) and highest enrolment growth rate was 1.49% in the academic session (2015-16) and lowest enrolment growth rate was -2.72% in the academic session (2014-15).

Table 8b: Enrolment status of women in Masters of Ayurved in Medicine and Surgery (M.A.M.S.) in India.

Year	All Category				Scheduled Caste				Scheduled Tribe				Other Backward Classes			
	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate	Total (Male & Female)	Total Female	Percent age (%) of Female	Growth rate
2013-14	132	38	28.78	..	0	0	00	..	1	1	100	..	22	5	22.72	..
2014-15	117	35	29.91	1.13	0	0	00	00	1	1	100	00	13	3	23.07	0.35
2015-16	105	34	32.38	2.47	1	0	00	00	0	0	00	00	18	5	27.77	4.7
2016-17	121	49	40.49	8.11	4	3	75	75	0	0	00	00	21	7	33.33	5.56
2017-18	113	54	47.78	7.29	5	4	80	5	1	1	100	00	5	4	80	46.67
2018-19	99	56	56.56	8.78	7	6	85.71	5.71	0	0	00	00	7	6	85.71	5.71
2019-20	204	146	71.56	15	34	25	73.52	-12.19	7	4	57.15	00	64	51	79.68	-6.03

Source: Annual report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-2014 to 2019-2020.

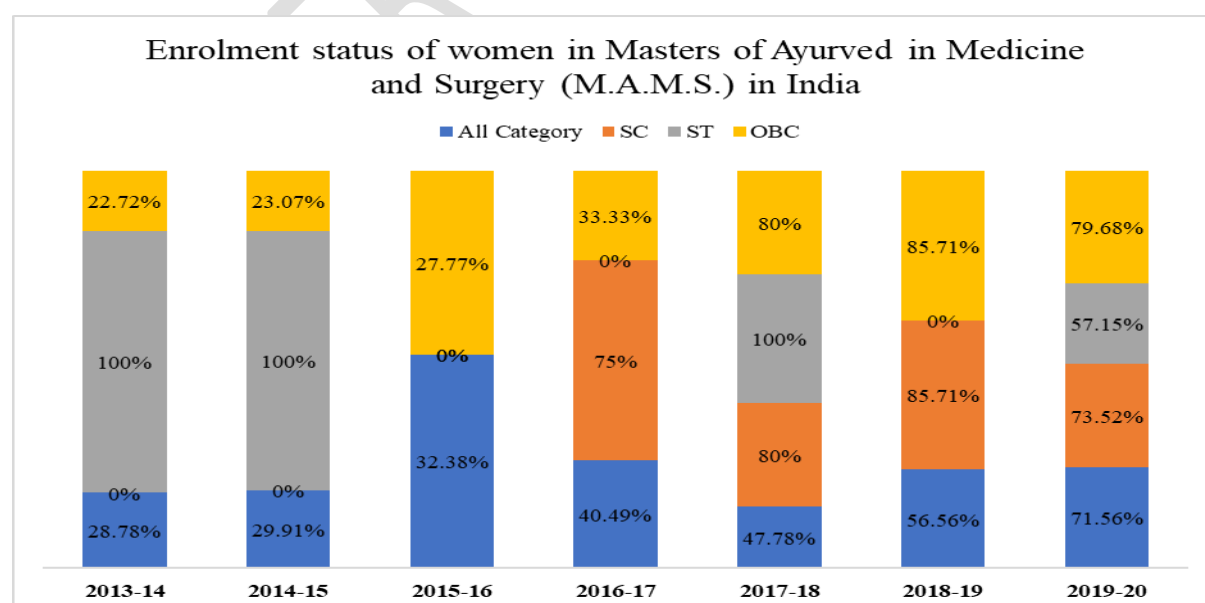


Figure 8b: Enrolment status of women in Masters of Ayurved in Medicine and Surgery (M.A.M.S.) in India.

FINDINGS:

The study revealed the following findings-

1. It was found that enrolment of females in Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) in the last seven years (2013-14 to 2019-20) is not hopeful. Enrolment growth rate is increasing gradually but gender gap is existing.
2. It was found that enrolment of females in Doctor of Medicine (M.D.) in the last seven years (2013-14 to 2019-20) is hopeful. Enrolment growth rate is increasing gradually but gender gap exists.
3. It was found that enrolment of females in Master of Surgery (M.S.) in the last seven years (2013-14 to 2019-20) is not hopeful. Enrolment growth rate is very little and, gender gap exists.
4. It was found that enrolment of females in Doctor of Medicine (D.M.) in the last seven years (2013-14 to 2019-20) is not hopeful. Enrolment of ST females in D.M in the last seven years (2013-14 to 2019-20) is 0.00%. Enrolment of ST females in D.M in the last seven years (2013-14 to 2019-20) is better than other three categories.
5. It was found that enrolment of females in Bachelor of Science in Nursing (B.Sc. - Nursing) and Masters of Science in Nursing (M.Sc. -Nursing) in the last seven years (2013-14 to 2019-20) is hopeful. Enrolment growth rate is very high and females are more enrolled than males.
6. It was found that enrolment of females in Bachelor of Pharmacy (B. Pharm.) and Masters of Pharmacy (M. Pharm.) in the last seven years (2013-14 to 2019-20) is hopeful but enrolment growth rate is very little and, gender gap is existing.
7. It was found that enrolment of females in Bachelor of Homeopathic Medicine and Science (B.H.M.S) in the last seven years (2013-14 to 2019-20) is hopeful. Enrolment growth rate is increasing gradually and females are more enrolled than males. Enrolment of females in Bachelor of Homeopathic Medicine and Science (B.H.M.S) in the last seven years (2013-14 to 2019-20) is not hopeful.

8. It was found that enrolment of females in Bachelor of Ayurved in Medicine and Surgery (B.A.M.S.) in the last seven years (2013-14 to 2019-20) is hopeful. Enrolment growth rate is very high and females are more enrolled than males. It was found that enrolment of females in Masters of Ayurved in Medicine and Surgery (M.A.M.S.) in the last seven years (2013-14 to 2019-20) is not hopeful.

DISCUSSION AND CONCLUSION:

This unfortunately translated into women folk staying away from hospitals as many were not prepared to be treated by male doctors (**Khattar, 2019**). The Medical Profession had a measly representation of women during the time when India gained independence in 1947 (**Khattar, 2019**). Enrolment of women has gradually increased in medical colleges in the country since independence (**Dewan, et al 2007**). There are still challenges such as the unequal representation of women in all disciplines, but to change this will require a change in the mindset of Indian society rather than the enacting of any law (**Khattar, 2019**). In the fields of cardiology and specialized surgery, there is a substantial gap between the total number of men and women doctors. The main reason for this can be attributed to the number of years taken to specialize in these fields and the demanding working hours, especially related to emergency calls (**Bhadra, 2009**). The enrolment in medical colleges at present has achieved close to gender parity in present times (**Khattar, 2019**). Improvement is definitely required to deduce that women in the medical profession have achieved parity. Hopefully with more awareness in society and positive changes in the mindset of people, this will be achieved in the future (**Khattar, 2019**). Further measures by the government and changes in societal patterns would be beneficial (**Khattar, 2019**). **Historically, women have been tasked with taking care of young children, the elderly, and the sick, making it easy for them to transition into nursing when they step into the workforce. It is also considered that women are more empathetic, selfless, and nurturing, which are prerequisites for being a good nurse.**

Researcher concluded that women enrolled in a large portion of (B.Sc. -Nursing), Masters of Science in Nursing (M.Sc. -Nursing), Bachelor of Ayurved in Medicine and Surgery (B.A.M.S.), Bachelor of Homeopathic Medicine and Science (B.H.M.S) and enrolled in a small portion of Master of Surgery (M.S.), Doctor of Medicine (D.M.), Masters of Ayurved in Medicine and Surgery (M.A.M.S.) in the last seven years (2013-14 to 2019-20).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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