

Research Involvement of Women in India

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Abstract: *Research is professional engagement for the conception or creation of new knowledge. The research provides a path to prosperity and progress. Women constitute half of the mankind (47.5 %). Women play a very important role in the progress of a family, society, and country and contribute their bit to the national economy. Education is a fundamental human right. Participation of women in research is the most significant instrument for social change. The involvement of women in research has resulted in improved productivity, improved income, and economic development, as well as a better quality of life and development of the country. So, the participation of women in education, particularly in research is a very important issue. The present paper attempts to examine the enrolment status of women in research in India. In this study, the research consists of Masters of Philosophy (M. Phil.), Doctor of Philosophy (Ph.D.), and Doctor of Literature (D.Litt.), and the position of women has been examined based on their enrolment status in the research program. This study was qualitative and documentary in nature. It was found that enrolment of women in research has been increasing gradually in the last seven years. Despite the existing gender gap, the participation of women in research has been increasing which is a good sign of our national educational development as well as India's socio-economic development.*

Keywords: AISHE, D. Litt., D. Sc., M. Phil., Ph. D., Research Programs, UGC, Women-Participation in Research

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Introduction

Education plays an essential role in national growth and development, as well as for a country's progress and wealth. Any nation can truly prosper economically or socially when it does not properly access and utilize its population's talent. 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. Apart from primary and secondary education, higher is also an option for development and transformation. The research provides a path to prosperity and progress. Participation of women in research indicates a significant correlation between gender equality and the level of economic and social development of a country. The literature review demonstrates that investment in women, and more specifically women's education, has numerous positive effects on not only women but also their children and families. These outcomes not only improve the quality of life of women and families but also combat poverty and foster economic growth. Research can improve or develop concepts, theories, models, techniques instrumentation, software, operational methods, etc. It is a probe that a woman is the main creator of any new creation. So, it is very important to engage girls in the field of research.

This research paper showed the status of women in research in India based on the enrolment data of the Annual Report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-14 to 2019-2020.

Review of Related Literature

Rana (2022) revealed that 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.

Kumar and Santosh (2021) concluded that women play vital roles in various disciplines at the university, ranging from teaching to administration. Women have made their mark in all fields, and history bears witness to their remarkable journey. Through higher education, women contribute to the empowerment of themselves and other women.

Sharma (2018) concluded that Indian higher education needs radical reforms. A focus on enforcing a higher standard of transparency, strengthening the vocational and doctoral education pipeline, and professionalization of the sector through stronger institutional responsibility would help in reprioritizing efforts and working around the complexities.

Ghara (2016) concluded that women's participation in higher education is increasing in almost all states. Women's enrolment in higher education is also increasing. The rate of increase is slow in almost all the states of India. The enrolment is dependent on women teachers. The expectation is still to be achieved. Thus, the establishment of higher educational institutes for women especially in rural areas is still in dearth, and women's enrolment is still low as compared to men's enrolment. The discipline-wise analysis may also be done

Halder and Dey (2014) concluded that both in our country and in West Bengal, there is a gender gap in the enrolment of male and female students. If this gap is not closed, not only India but the entire world will face significant difficulties because higher education for women is essential for realizing their full potential and preparing them for the demands of a rapidly changing society.

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 the Indian. This inspires the researcher to investigate the “Enrolment Status of Women in Research in India.”

Statement of the Problem and Rationale of the Study

The current study focuses on the Research Involvement of Women in India. The purpose of the study is to investigate the status of women in research in India. Society compromises both men and women, and education is equally important to both. Education - especially research - is also likely to enhance women's economic independence by equipping them with the skills necessary to take up paid employment opportunities. Participation of women in research strengthens and reduces economic inequality through paid employment opportunities. Research for women is the most significant instrument for social change. Research on women has resulted in improved productivity, improved income, and economic development, as well as a better quality of life and brings the development of the country. So, the participation of women in education, particularly in research is a very important issue.

Objectives

The objectives of the study were:

- To study social category-wise enrolment status of women in Masters of Philosophy (M. Phil.) in India.
- To examine social category-wise enrolment status of women in Doctor of Philosophy (Ph. D.) in India.
- To examine social category-wise enrolment status of women in Doctor of Literature (D. Litt.) in India.
- To study the social category-wise enrolment status of women in Doctor of Science (D. Sc.) in India.

Methodology of the Study

This study was qualitative and documentary in nature. As a source of data researcher used the Annual Report of All India Survey on Higher Education (AISHE) Department of Higher Education, Ministry of Education, Govt. of India., 2013-14 to 2019-2020, and information collected from various books, Research Article, Magazines, Research Journal, E-journal, Annual Report of UGC, and Report of the Higher Education Department of West Bengal and from the Higher Education Department of India.

Delimitation of the Study

In this study, research consists of Master of Philosophy (M. Phil.), Doctor of Philosophy (Ph. D.), and Doctor of Literature (D. Litt.), in which, the status of women has been examined based on their enrolment status in that research program.

Data Analysis and Interpretation

Analysis of Objective 1: To study the enrolment status of women in Masters of Philosophy (M.Phil.) in India.

Table 1: Enrolment status of women in Masters of Philosophy (M. Phil.) 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	31380	17748	56.55	-	5125	2589	50.51	-	1181	573	48.51	-	11613	7596	65.40	-
2014-15	33371	19264	57.72	1.07	5633	2882	51.16	0.65	1148	572	49.82	1.31	13192	8416	63.79	-1.61
2015-16	42523	25050	58.90	1.18	7438	3988	53.61	2.45	1763	1001	56.77	6.95	16633	10776	64.78	-0.99
2016-17	43267	26803	61.94	3.04	7632	4066	53.27	-0.34	2030	1093	53.84	-2.93	17948	12186	67.89	3.11
2017-18	34109	21822	63.97	2.03	6190	3441	55.58	2.31	1478	767	51.89	-1.95	14828	10610	71.55	3.66
2018-19	30692	19069	62.13	-1.84	4993	2710	54.27	-1.31	1486	797	53.63	1.74	12436	8472	68.12	-3.43
2019-20	23934	14891	62.21	0.08	3543	2021	57.04	2.77	1226	636	51.87	-1.76	9095	6439	70.79	2.67

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

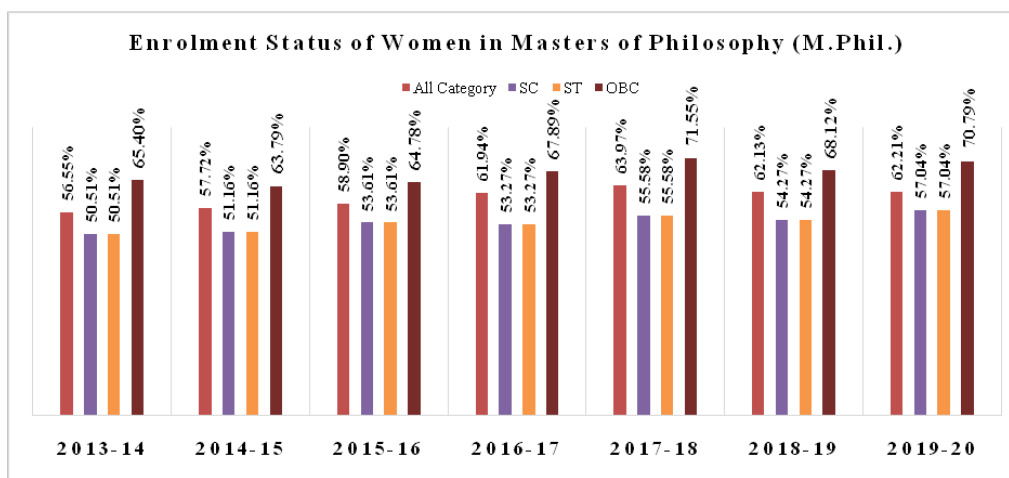


Figure 1: Enrolment status of women in Masters of Philosophy (M. Phil.) in India

Interpretation: Table 1 showed social category-wise enrolment status of females in M. Phil. in the last seven years (2013-14 to 2019-20). Enrolment status in Masters of Philosophy (M. Phil.) is hopeful, highest enrolment of all category females was 63.97% in the academic session of (2017-2018) and highest enrolment growth rate was 3.04 % in the academic session (2016-17) and lowest enrolment growth rate was -1.84 % in the academic session (2018-19). Enrolment status of SC category females is hopeful, highest enrolment of SC category females was 57.04% in the academic session of (2019-2020) and highest enrolment growth rate was 2.77 % in the academic session (2019-20) and lowest enrolment growth rate was -1.31 % in the academic session (2018-19). Enrolment status of ST category females is hopeful, highest enrolment of ST category females was 56.77% in the academic session of (2015-2016) and highest enrolment growth rate was 6.95 % in the academic session (2015-16) and lowest enrolment growth rate was -2.93 % in the academic session (2016-17). Enrolment status of OBC category females is hopeful, highest enrolment of OBC category females was 71.55% in the academic session of (2017-2018) and highest enrolment growth rate was 3.66 % in the academic session (2017-18) and lowest enrolment growth rate was -3.43 % in the academic session (2018-19).

Analysis of Objective 2: To examine the enrolment status of women in Doctor of Philosophy (Ph.D.) in India

Table 2: Enrolment status of women in Doctor of Philosophy (Ph. 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	104511	42161	40.34	-	9281	3305	35.61	-	3815	1644	43.09	-	19005	7359	38.72	-
2014-15	114704	46993	40.96	0.62	10056	3656	36.35	0.74	3698	1574	42.56	0.53	21490	8497	39.53	0.81
2015-16	123465	50956	41.27	0.31	11199	4158	37.12	0.77	3921	1668	42.54	-0.02	24638	9634	39.10	-0.43
2016-17	138245	58380	42.22	0.95	12559	4643	36.96	-0.16	4851	2049	42.23	0.31	28816	11789	40.91	1.81
2017-18	158363	67946	42.90	0.68	16138	5801	35.94	-1.02	5938	2553	39.62	-2.61	37034	15291	41.28	0.37
2018-19	166620	73239	43.95	1.05	17051	6641	38.94	3.00	5900	2562	43.42	3.8	37346	16035	42.93	1.65
2019-20	199225	89976	45.16	1.21	19571	7681	39.24	-0.3	7149	3140	43.92	0.5	49346	21804	44.18	1.25

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.

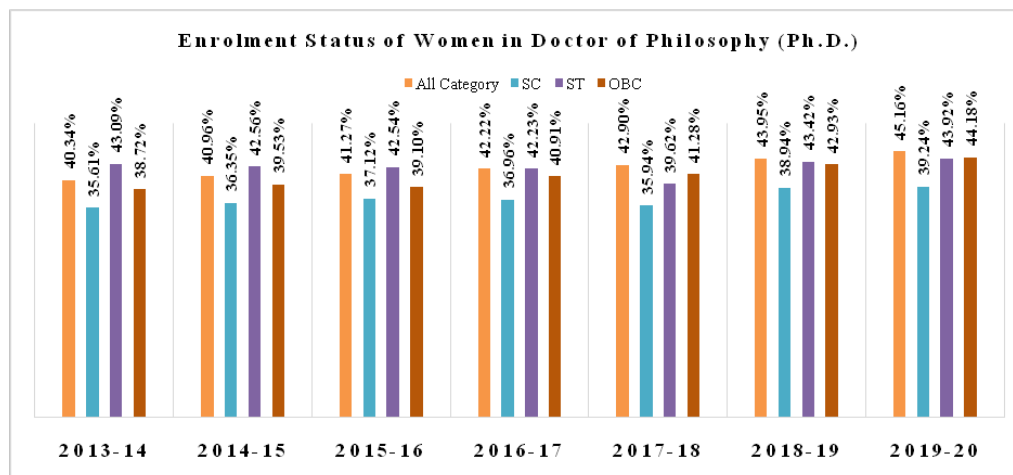


Figure 2: Enrolment status of women in Doctor of Philosophy (Ph. D.) in India

Interpretation: The table 2 showed the social category-wise enrolment status of females in Ph.D. in the last seven years (2013-14 to 2019-20). Enrolment status in Doctor of Philosophy (Ph.D.) is not hopeful, the highest enrolment of all category females was 45.16% in the academic session of (2019-2020) and the highest enrolment growth rate was 1.21 % in the academic session (2019-20) and lowest enrolment growth rate was -0.31 % in the academic session (2015-16). The enrolment status of SC category females is not hopeful, the highest enrolment of SC category females was 39.24% in the academic session of (2019-2020) and the highest enrolment growth rate was 3.0 % in the academic session of (2018-19) and the lowest enrolment growth rate was -1.02 % in the academic session (2017-18). The enrolment status of ST category females is not hopeful, the highest enrolment of ST category females was 43.92 % in the academic session of (2019-2020) and the highest enrolment growth rate was 3.8 % in the academic session of (2018-19) and the lowest enrolment growth rate was -2.61 % in the academic session (2017-18). The enrolment status of OBC category females is hopeful, the highest enrolment of OBC category females was 44.18 % in the academic session of (2019-2020) and the highest enrolment growth rate was 1.81 % in the academic session (2016-2017) and the lowest enrolment growth rate was -0.81 % in the academic session (2014-15).

Analysis of Objective 3: To examine the enrolment status of women in Doctor of Literature (D. Litt.) in India.

Table 3: Enrolment status of women in Doctor of Literature (D. Litt.) 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	7	6	85.71	-	0	0	0.00	-	0	0	0.00	-	0	0	0.00	-
2014-15	14	6	42.85	-42.86	0	0	0.00	0.00	0	0	0.00	0.00	5	2	40	40
2015-16	19	15	78.94	36.09	1	1	100	100	1	1	100	100	5	5	100	60
2016-17	14	10	71.42	-7.52	1	1	100	100	1	1	100	100	5	5	100	100
2017-18	9	7	77.77	6.35	1	1	100	100	1	1	100	100	5	5	100	100
2018-19	0	0	0.00	-	0	0	0.00	100	0	0	0.00	100	0	0	0	100
2019-20	0	0	0.00	-	0	0	0.00	0.00	0	0	0.00	0.00	0	0	0	0.00

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

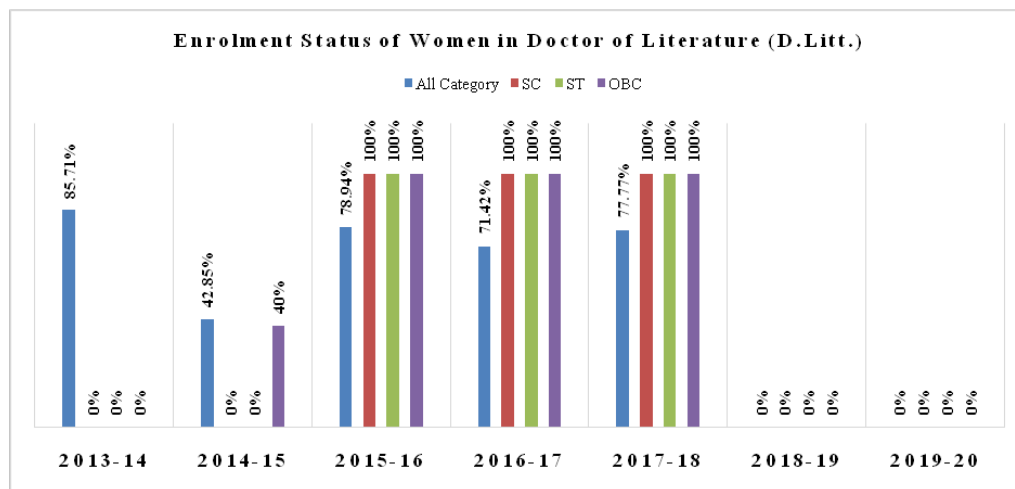


Figure 3: Enrolment status of women in Doctor of Literature (D.Litt.) in India

Interpretation: The table 3 showed the social category-wise enrolment status of females in D.Litt. in the last seven years (2013-14 to 2019-20). In the academic sessions of (2015-2016), (2016-2017) and (2017-2018) enrolment is 100% and enrolment status in the academic session of (2013-2014), (2018-2019), (2019-2020) is 0.00 %.

Analysis of Objective 4: To study the social category-wise enrolment status of women in Doctor of Science (D.Sc.) in India.

Table 4: Enrolment status of women in Doctor of Science (D.Sc.) 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	37	22	59.46	-	4	3	75.00	-	1	1	100	-	1	0	0.00	-
2014-15	25	13	52.00	-7.46	1	1	100	25.00	0	0	0	-100	0	0	0.00	0.00
2015-16	39	22	56.41	-4.41	3	1	33.33	-66.67	0	0	0	0.00	2	1	50.00	50.00
2016-17	108	52	48.15	-8.26	5	2	40.00	-6.67	1	1	100	-100	9	3	33.33	-16.67
2017-18	100	56	56.00	-7.85	15	11	73.33	-33.33	2	2	100	100	4	2	50.00	16.67
2018-19	80	40	50.00	6.00	12	8	66.67	-6.66	0	0	0.00	100	4	1	25.00	-25.00
2019-20	75	35	46.67	3.33	5	9	55.56		2	0	0.00	0.00	6	2	33.33	-8.33

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

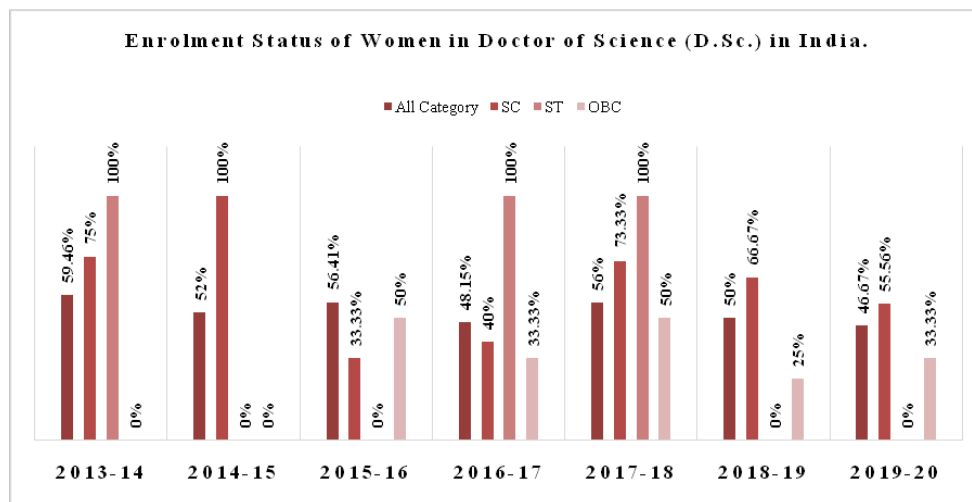


Figure 4: Enrolment status of women in Doctor of Science (D.Sc.) in India

Interpretation: The table 4 showed the social category-wise enrolment status of females in D.Sc. in the last seven years (2013-14 to 2019-20). Enrolment status in Doctor of Science (D.Sc.) is not hopeful. Highest enrolment of all category females was 59.46 % in the academic session of (2013-2014) and highest enrolment growth rate was 6.00 % in the academic session (2018-19) and lowest enrolment growth rate was -8.26 % in the academic session (2016-17). Highest enrolment of SC category females was 100 % in the academic session of (2014-2015) and highest enrolment growth rate was 25.00 % in the academic session (2014-15) and lowest enrolment growth rate was -66.67 % in the academic session (2015-16). Highest enrolment of ST category females was 100 % in the academic session of (2013-2014)(2016-2017) (2017-2018) and highest enrolment growth rate was 100 % in the academic session (2014-15) (2017-18) and enrolment growth rate was 0.00 % in the academic session (2013-14) (2014-15) (2019-20). The highest enrolment OBC category females were 50.00 % in the academic session of (2015-2016) (2017-2018) and highest enrolment growth rate was 50.00 % in the academic session (2015-16) and lowest enrolment growth rate was -25.00 % in the academic session (2018-19).

Findings

The study revealed the following findings:

- It was found that the enrolment status of all the categories, SC, ST and OBC females in M. Phil. in the last seven years (2013-14 to 2019-20) is hopeful. Enrolment of OBC category women is higher than the other three categories.
- It was found that the enrolment status of SC, ST and OBC females in Ph. D. in the last seven years (2013-14 to 2019-20) is hopeful. Enrolment of SC category women is lower than the other three categories.
- It was found that enrolment of females in Doctor of Literature (D. Litt.) inconsistency. Enrolment of females D.Litt. in the academic session of (2015-2016), (2016-2017) and (2017-2018) is hopeful and zero enrolment showed in the academic session of (2013-2014), (2018-2019), (2019-2020).
- It was found that the enrolment status of all categories, SC, ST and OBC females in Doctor of Science (D.Sc.) in the last seven years (2013-14 to 2019-20) is hopeful. Enrolment of ST and OBC category women is lower than the other categories.

Discussion and Conclusion

The study concluded that in the last seven years, there has been progress in women enrolment in research which revealed from enrolment status of women in the last seven years. It was also observed that the gender gaps between male and female enrolment rates are narrowing down gradually. The progress of women enrolment has been increasing in the last seven years in India, in the field of research, women have made remarkable improvements. There is a need for more incentives in education and the participation of women

in research. The government needs special attention to women's educational grants and subsidies that ensure the full participation of women in research which brings changes in society. It could be said that there is no doubt the participation of women in research plays a pivotal role in the process of women's empowerment.

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