



STATUS OF INDIAN WOMEN IN HIGHER EDUCATION: GENDER PARITY ACHIEVED OR NOT?

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ABSTRACT

Higher education is the most crucial factor in determining the overall development of a nation because it builds the skills of an individual and extends the knowledge of previous learning. At the same time, empowerment of women is also a pre-requisite of the development and growth of a country and empowering women is possible only through education, mostly higher education. This study analysed the present status of women in higher education in India. This paper also tried to find out the discipline-wise gender disparity in higher education, whether the gender gap in discipline-wise enrolment is increasing or decreasing over time. At last, the paper also tried to give some possible reasons for the present status of women in India. It was found that the gender parity in GER in higher education is achieved, but if we look at the discipline-wise enrolment, the gender disparity still exists. Some of the disciplines showed drastic improvements, but women are still confined outside the engineering and technology-related courses. The total no. of women in medical and nursing courses increased, but only a few of them continue it to their profession. The reason is that women, even today, have to struggle between profession and family responsibilities.



KEYWORDS: Women tertiary education, Gender parity, Gap in discipline wise enrolment

INTRODUCTION

Tertiary education or higher education means knowledge at the level of universities and colleges. It comes after a higher secondary level of education. Tertiary education is a crucial factor in determining the overall development of a nation because it builds the skills of an individual and extends the knowledge of previous learning. At the same time, gender disparity in higher education may miss significant growth and development opportunities. Women are a potential source of economic and social development. Hence, the empowerment of women is required for development. Education is the most critical way to empower women. An educated woman can create an environment that allows a child to gather and analyse information, which helps in creating a sustainable society. Higher education to women not only helps them in empowering themselves but also help them in earning a living through skilled work. Nevertheless, in India, during higher education, women face many issues and challenges due to various socio-economic factors. Sometimes these issues may result in the discontinuation of education of women, and therefore it is required to discuss and control these issues.

OBJECTIVES

- The main objectives of this paper are to study:
- Present status of women in Higher education in India
 - The gender gap in Discipline-wise enrolment in tertiary education and identify whether, by the time, it is increasing or decreasing.
 - To specify some possible reasons, for the present status of women in higher education in India.

Data Source and Methodology

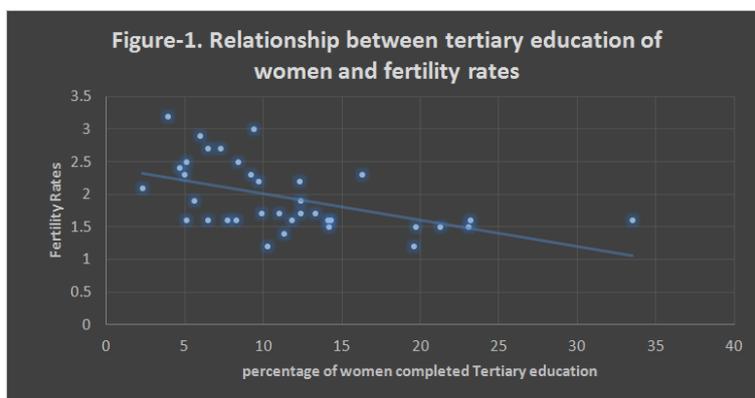
The period for which data have been collected is 2009-19. All the data used in the present study is collected from secondary sources. The sources are different reports of AISHE and MHRD on Higher and technical education and PLFS NSSO, 2019 and SDG report 2019. This is a descriptive study. Observation of data tables, charts, scatter diagrams and trend line are used to analyse the data.

DATA ANALYSIS AND RESULTS

Firstly, we start with why women's tertiary education is essential. Here we draw some scatter diagrams to show the relationship between women's tertiary education and different development indicators.

1. Women tertiary education and fertility rates

By, getting higher education, women not only take good care of their children and families but also, understand that having more children is more like a liability to the family as well as to the nation. Besides, as women give more time to education, the early marriages rate falls, which lead to a reduction in fertility rates. Here we draw a scatter diagram to show the relationship between women's tertiary education and fertility rates by using state-wise data on the percentage of women who completed tertiary education and fertility rates for the year 2018-19.



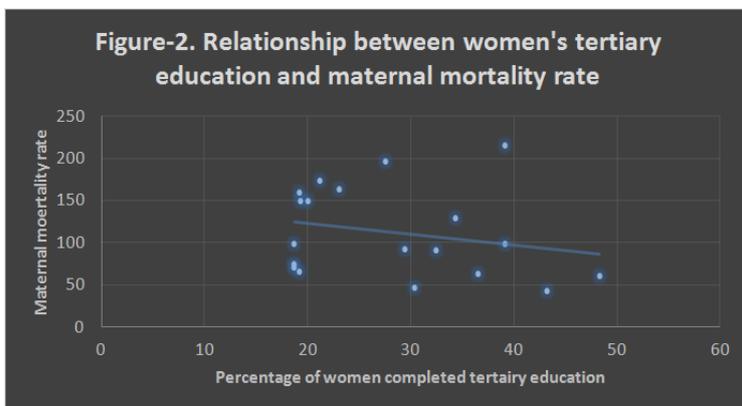
Data Source: PLFS, NSSO 2018-19

The trend line in the above diagram shows that there is a negative relationship between the percentage of women who completed higher education and fertility rates. It implies that an increase in tertiary education of women leads to a fall in fertility rates. Reduced fertility rates can increase the welfare of family through high per capita allocation of resources.

2. Women's tertiary education and Maternal mortality rates

It is also found by various studies that women's tertiary education and maternal education is positively related to nourishment among their health and their kid's health. Moreover, Maternal mortality rates decline due to an increase in women's tertiary education. Here we draw a scatter diagram to show the relationship between maternal mortality rates and the percentage of women who completed tertiary education by using state-wise data on the percentage of women who completed

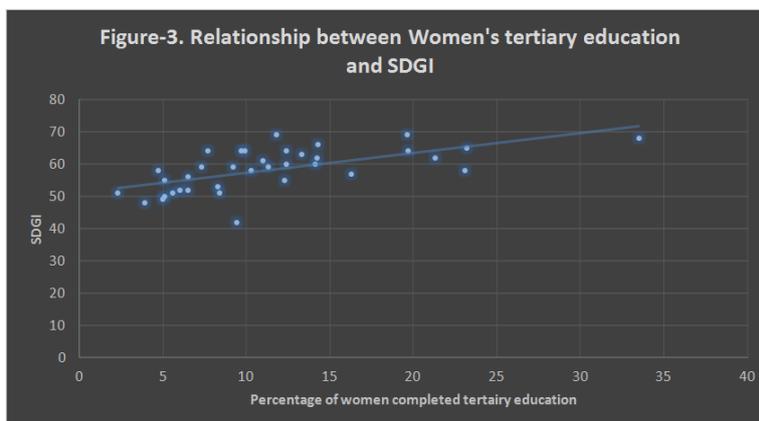
tertiary education and maternal mortality rates. The following scatter diagram shows a downward sloping trend line. It implies a negative relationship between women's tertiary education and maternal mortality.



Data source: PLFS, NSSO and SRS, Statistical table (2016-18)

3. Women's tertiary education and Sustainable development index

The following scatter diagram shows the relationship between the percentage of women who completed tertiary education and the Sustainable development goal index. We took state-wise data on SDGI and the percentage of women who completed tertiary education for the year 2018-19. The scatter diagram shows a positive relationship. It implies a higher percentage of women completed tertiary education; higher will be the Sustainable development of that state.



Data Source: SDG progress report, PLFS 2018-19

So, we observed the significance of women's tertiary education in determining different development indicators. Now let us have a look at the enrolment of men and women in tertiary education in the last ten years.

Gross Enrolment ratio in Higher Education

Gross enrolment ratio (GER) of tertiary education refers to the rate of no. of students enrolled in colleges and universities to no. of people belongs to the age of 18 to 23 years.

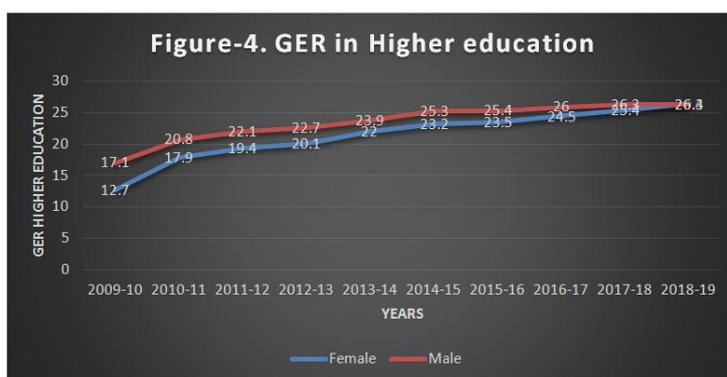
$$\text{Gender Parity Index for tertiary education} = \frac{\text{Female GER in tertiary education}}{\text{Male GER in tertiary education}}$$

Table 1. Gross Enrolment Ratio in India from 2009 to 2019

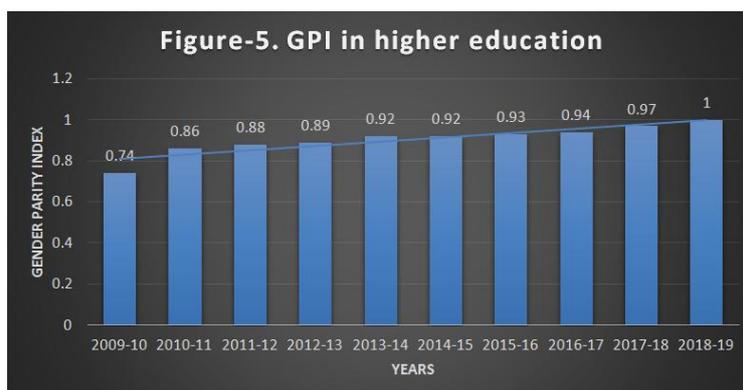
Year	Female	Male	Total	GPI
2009-10	12.7	17.1	15	0.74
2010-11	17.9	20.8	19.4	0.86
2011-12	19.4	22.1	20.8	0.88
2012-13	20.1	22.7	21.5	0.89
2013-14	22	23.9	23	0.92
2014-15	23.2	25.3	24.3	0.92
2015-16	23.5	25.4	24.5	0.93
2016-17	24.5	26.0	25.2	0.94
2017-18	25.4	26.3	25.8	0.97
2018-19	26.4	26.3	26.3	1.00

Data source- AISHE, MHRD

After independence, the progress of tertiary education in India is considerable. According to the above table, we can observe that by the time gross enrolment ratio of women increases significantly. In 2009-10, it was 12.7, whereas male GER was 17.1, resulting in a GPI of 0.74. In ten years, the gross enrolment ratio of female crossed the gross enrollment ratio of men in India. According to the recent survey on Higher education 2018-19, Gender parity in enrolment in higher education has achieved. The following figures of Male and female GER and Chart of Gender Parity Index will make the picture clearer-



Data Source: AISHE reports



Data Source: AISHE report

Hence the gender parity in higher education enrolment is achieved. Now let us have a look at discipline wise enrolment.

Table no. 2 - Discipline wise enrolment in Higher education for the year 2018-19

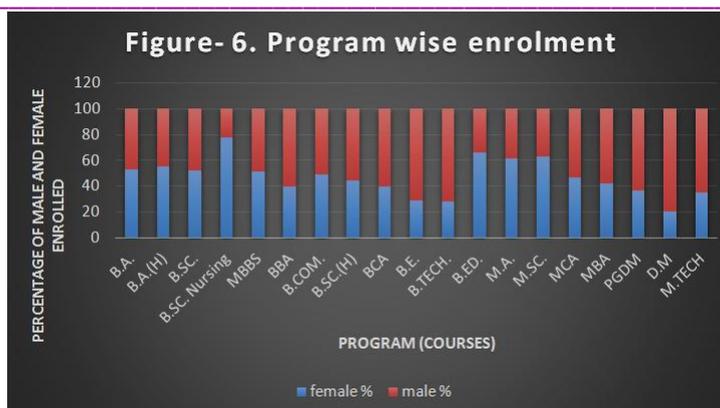
DEGREE OR DIPLOMA	NO. OF STUDENTS (IN LAKHS)	FEMALE %	MALE %
B.A.	93.49	53.04	46.96
B.A.(H)	16.39	55.21	44.79
B.SC.	46.8	51.70	48.30
B.SC. Nursing	2.56	78.05	21.95
MBBS	2.67	51.41	48.59
BBA	5.2	39.26	60.74
B.COM.	40.3	48.80	51.20
B.SC.(H)	5.83	44.10	55.90
BCA	5.11	39.26	60.74
B.E.	16.45	28.86	71.14
B.TECH.	21.25	28.00	72.00
B. E.D.	12.23	66.39	33.61
M.A.	15.12	61.78	38.22
M.SC.	6.79	62.72	37.28
MCA	1.47	46.50	53.50
MBA	5.88	41.67	58.33
PGDM	0.21	36.81	63.19
D.M	429*	20.51	79.49
M.TECH	1.355	34.99	65.01

Data source- AISHE, 2018-19

*figure not in lakhs

The above courses constitute around 90% of total enrolment in 2018-19.

B.A. degree had the highest no. of enrolment, according to AISHE 2018-19, which comprised 53.04% of female students and 46.96% of male students. The influx of female students is more than male students in under graduation program degrees like B.SC., B.SC.(H) and B.SC. (nursing). On the other hand, commerce and technology-related graduation programs are highly male-dominated. For instance, In BBA 5.2 lakh students are enrolled in 2018-19, in which only 39.26% are female students. Similarly, in BCA, 39.26% of the total are female, and 60.74% are male students. B. TECH and B.E only have 28% and 28.86%, female students, respectively. However, there are some graduation courses, in which the percentage of male and female students, is almost 50-50. These courses are B.COM, B.SC and MBBS. Post-graduation level programs also show a similar trend to graduate programs. Male students heavily enrol in professional courses like MBA, PGDM, MCA and M. TECH. For example, In the MBA course, 58.33% are male students, whereas 41.67% are females. On the contrary, humanities and teaching courses are female-dominated as M.A. has 61.78% female students. Also, medical science, nursing and teaching (B. E.D.) are some professional courses where female students are enrolled more than males. B. ED. has 66.39% females, and B.SC nursing has 78.05% of females registered. Let us have a look at the bar chart below-



Data source- AISHE, 2018-19

In a nutshell, we can say that however female's GER has converged with male's GER, even then there exists disparity among gender if we look at discipline wise enrolment. In professional courses, influx skewed towards men. Medicine, commerce and technology are some of the areas that are heavily male-dominated while humanities departments are female-dominated. Now let us see whether the situation was similar all along or is it improved than before. So, here in the below table, discipline-wise female enrolment per 100 males is shown.

Table-3. Discipline-wise enrolment female per 100 males from the year 2011 to 2019

Discipline	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14	2012-13	2011-12
Arts	113	112	112	113	113	112	110	104
Science	104	95	91	89	88	90	93	95
Commerce	95	91	91	86	84	81	81	79
Engineering and technology	41	40	40	39	39	40	40	40
Education	184	183	179	165	161	151	160	153
Medical Science	154	157	158	157	154	157	154	155
IT and Computer	69	71	74	77	79	80	72	67
Management	60	62	60	60	58	58	57	55
Law	51	50	48	46	45	48	47	47
Physical education	44	44	44	41	42	39	37	35

Data Source: AISHE Reports

According to the above table, one can see that in ten disciplines, as mentioned above, only three disciplines had females more than males over the years. These are Arts, education and medical science. Only science is the discipline which showed an overall improvement from 95 females per 100 males to 104 females per 100 males. Other than this from the year 2011-12 to 2018-19, commerce showed a good improvement. It increases from 79 females per 100 males to 95 females per 100 males. Management, Law, Physical education, I.T. and computer showed a little improvement with some ups and downs in between. Engineering and technology are the only disciplines that show almost no improvement. However, the total female enrolment in engineering and technology courses has improved from 790965 in 2011-12 to 1112476 in 2018-19, constitute a 40.64% increase. See the below table-

Table-4: Total enrolment of females in different disciplines-

Discipline	female 2018-19	Female 2011-12	% change
Arts	4958599	3390625	46.24439447
Science	2404015	995810	141.4130206
Commerce	1966492	1087458	80.8338345
Engineering and technology	1112476	790965	40.6479427
Education	938534	313859	199.0304564
Medical Science	725867	297715	143.8127068
IT and Computer	306265	318790	-3.928918724
Management	245000	148059	65.47457433
Law	133859	49727	169.1877652
Physical education	15949	6095	161.6735029

Data Source: AISHE reports

In all the Disciplines, Engineering and technology and I.T. and computer showed the least increase in the percentage of female enrolment. I.T. and computer even showed a decline in total female enrolment—medical, Law, science and education show drastic improvements. However, women are more in medical science courses, and this number has increased a lot over time. However, of all the women who took medical science course, only a few of them practise. According to the health workforce in India report of WHO, the male-female ratio of all the health workers is 1.6. It implies of all health workers, only 38% were female, and of allopathic doctors, only 16.8% were female.

The reason behind the high enrolment of women in medical, nursing and teaching courses is that, 'Degree converts to career', and in India, women's career choices and growth are profoundly affected by social biasedness and gender stereotypes. In India, society generally views science and technology-related jobs as masculine. Also, men are believed to be mathematically superior to women and therefore better suited for engineering and technological jobs. Furthermore, due to this social environment and belief, women may be less confident about their abilities, this, in turn, affects the motivation and interest of women in the science and technology field. Even workplaces are not making a more comfortable environment for women, and this is also one of the main reasons why females are not choosing science and engineering-related courses. Moreover, technology and science-related courses are relatively expensive, and this could be among the most substantial basis of the low enrolment of females in these courses because people do not want to invest much in girl's education.

On the other hand, teaching and nursing courses are highly occupied by female candidates because again these are the professions, which traditionally considered as best female jobs. To become a teacher is both safe and respected. It is the profession that gives a girl enough time so that she can take care of her family and children.

Here we classified the reasons for the gender gap associated with enrolment-

1. Economic reasons- Professional education is generally costly; Indian parents are not willing to pay high amounts for their daughters because they have to spend money on their marriage as per social tradition. Due to privatisation of higher education, the gender gap is further deepened. Therefore high no. of women is engaged in courses of general educations which are easily accessed by women and less expensive. (Madhuri, 2014)

On the other hand, women in natural science also increase this is due to the reason that salary in natural science-related courses is not very high and therefore men prefer it less than women. (karuna chanana, 2007)

2. Social reasons- many social factors decide women choices of their subjects. The first is early marriages. Generally, in India, the marriage of the girl is considered the actual responsibility of parents, and therefore early marriages of girls prevail in India. Early marriages of girls restrict their participation in higher education (Madhuri 2014). Other than this, women are still not a decision-

maker. She depends on male members of the family for the decision of their career, academic stream and job choices.

Parents do not encourage their daughters to do work, and this social environment made girls accept and believe their dependency on the other earning person in families mainly on male members. Also, it is believed in India that women are for families and children care, and therefore, they generally choose academic courses, not professional or such professional courses with which they can continue their household chores.

Increasing no. of women enrolment in medical sciences is also due to one of the social reasons. In India, the practice of female seclusion enjoyed the treatment of women patients by women doctors. This necessitates training female doctors, thereby enabling women to enter the medical profession. (Chanana, 2007)

3. Institutional reasons- Lack of facilities in colleges, lack of female teacher and lack of security lead to the low enrolment of women in higher education. The safety of their girls within the college premise is one of the major concerns for many parents. The presence of female teachers often reduces parental concern about their daughters' security. (Kesarwani, 2018)
4. Other reasons- Other reasons included a lack of women role models, and therefore women generally have a lack of self-confidence, which leads to a lack of self-motivation. In India, society generally views science and technology-related jobs as masculine. Also, men are believed to be mathematically superior to women and therefore better suited for engineering and technological jobs. Furthermore, due to this social environment and belief, women may be less confident about their abilities, this, in turn, affects the motivation and interest of women in the science and technology field. Even workplaces are not making a more comfortable environment for women, and this is also one of the main reasons why females are not choosing Technology and engineering-related courses.

CONCLUSION AND POLICY IMPLICATIONS

The paper tried to find the current status of women in higher education in India and also tried to find reasons behind it through the review of existing journals, articles and research papers. The study found that in tertiary education gender parity has achieved. It implies that the gross enrolment ratio of women crossed the gross enrolment ratio of men in the year 2018-19 at all India level. However, enrolment in different discipline shows high gender disparity. Technology, engineering, management, Law and commerce are highly male-dominated while medical science, nursing and teaching are female-dominated. There are many socio-economic reasons behind this. Tertiary education of women is found to be a crucial factor in this study. It not only increases the level of sustainable development but also reduces fertility. Therefore, there is a need for that state government implement programs and measures like scholarship programs, especially for women in technical education, which can increase females in tertiary education, especially in professional courses. Govt. also should increase education-based jobs for women and implement such type of awareness programs which can change people attitude towards women.

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