

Gender Disparity in Enrolment in Higher Education Institutions: Trend Analysis

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Abstract

Higher education acts as a building block for a nation's development. Hence, the figures in Gross Enrolment Ratio (GER) of higher education speak volumes about nations' economic and social status. The present paper aims to study the trend of gender disparity in higher education in terms of Gross Enrolment Ratio (GER) and enrolment in various streams of study in the Higher Education Institutions of India. The study is based on the reports of All India Survey on Higher Education (AISHE). The trend analysis of the Gross Enrolment Ratio (GER) revealed that in a decade the Gross Enrolment Ratio (GER) of female increased from below to above male Gross Enrolment Ratio (GER). The study further revealed that the enrolment of female in Social Science, Science, Commerce and Medical Science streams are more than male. The enrolment of male in Engineering and Technology, Management, Law and IT and Computer streams are more than female.

Keywords: *Gross Enrolment Ratio (GER), higher education, gender disparity, streams.*

Introduction:

Higher education occupies a significant place in the education system of any nation as it plays a major role in nation building. Higher education is expected to produce efficient and skilled manpower and hence, the future of a nation depends upon it. At present, higher education in India is a huge sector comprising huge number of students enrolled in different universities, higher education institutions, affiliated colleges and research centers which are funded by the Central Government, by the State Government or by private stakeholders of education. It is also comprised of huge number of teaching and non-teaching staffs, worth millions of rupees annually. According to AISHE Report 2020-21, there are 1,113 Universities; out of which 657 are managed by the Government managed, 10 are private deemed universities, and 446 are private unaided universities. There are 43,796 colleges and the number of college per lakh population in the country is 31. The total Gross Enrolment Ratio (GER) of Higher Education in India is 27.3%. GER for male and female students are 26.7% and 27.9% respectively. This

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indicates that GER of female is higher than male. But this was not the scenario of Higher education of India since its inception.

National Education Policy (NEP) 2020 is expected to bring remarkable changes in higher education by addressing its issues and introducing innovative strategies. The policy has targeted to achieve 50% Gross Enrolment Ratio (GER) in higher education by 2035. NEP 2020 has also aimed to provide equitable access to quality education to all students in Higher Education Institutions. For fulfilling this aim, one of the recommendations forwarded by NEP is to enhance gender balance in admissions to Higher Education Institutions. Hence, NEP is expected to remove gender disparity in Higher Education Institutions. In order to predict if NEP will be successful in achieving its goals, there is a need to analyze the trend of gender disparity in higher education.

Review of Literature:

Rawat (2020), pointed out that there exists significant variation in male and female GER and significant gender disparity exist in terms of enrolment in different courses in higher education.

Das (2019), conducted a study on gender gap in higher education in Assam and found that gender gap exist in gross enrolment in higher education due to lower GER of female than male.

Karak & Sen (2017), pointed out that gender inequality in higher education is complex and diversified as it exists in all spheres like education, employment opportunities, health, cultural and social issues and so on.

Devi (2015), revealed that gender discrimination exists in higher educational institution in terms of administrative and academic related positions and enrolment of students. The study further revealed that gender issues exist in all educational institutions in one way or the other.

Mitra (2015), revealed that percentage of enrolment and Gross Enrolment Ratio (GER) do not reveal the true picture of gender disparity as it is deeply rooted within the educational systems and can be manifested only through low Gender Parity Index (GPI) scores.

Vijaylakshmi (2015), revealed inter-state disparity, gender disparity, and social-group disparity can be seen in terms of enrollment in higher education.

Chutia, Borah & Hazarika (2014) concluded that per capita NSDP, percentage of population below poverty line, drop out ratio of girls and women's age at marriage have significant correlation with women enrolment in higher education in India.

Objectives:

1. To study the trend of gender disparity in Gross Enrolment Ratio of Higher Education in India.
2. To study the trend in gender disparity in enrolment in different streams in Higher Education Institutions in India.

Delimitation of the study:

1. The study covers only the academic years 2011-12 to 2020-21.
2. It is confined only to gender disparity in terms of Gross Enrolment Ratio (GER) and enrolment in different streams in Higher Education Institutions.
3. It is delimited only to eight streams, i.e., Social Science, Science, Commerce, Engineering and Technology, Medical Science, Management, Law, and IT and Computer.

Methodology: Descriptive survey method is used in the study. For the present study, data is gathered from secondary source, i.e. Government reports on Higher education.

Analysis and Interpretation:

Objective 1: To study the trend in gender disparity in Gross Enrolment Ratio of Higher Education in India:

1. **Gross Enrolment Ratio:** Gross Enrolment Ratio in Higher education is the ratio of enrolment of population belonging to 18-23 years age group.

Table no. 1. Gross Enrolment Ratio (GER) in Higher education of India (2011-12 to 2020-21)

Years	Male	Female	Total
2011-12	22.1	19.4	20.8
2012-13	22.7	20.1	21.5
2013-14	23.9	22.0	23.0
2014-15	25.3	23.2	24.3
2015-16	25.4	23.5	24.5
2016-17	26.0	24.5	25.2
2017-18	26.3	25.4	25.8
2018-19	26.3	26.4	26.3
2019-20	26.9	27.3	27.1
2020-21	26.7	27.9	27.3

Source: AISHE Report

Trend analysis of GER in higher education from the academic year 2011-12 to 2020-21 reveals that it has increased from 20.8 to 27.3. The GER of male was higher than female for seven consecutive academic years i.e. 2011-12 to 2017-18. But since last three academic years, i.e., 2018-19, 2019-20 and 2020-21, the GER of female in higher education stands more than male. This indicates a good sign of bridging the gender gap in enrolment by female students. It reveals that although there is an increase in Gross Enrolment Ratio of both male and female, gender gap always existed in terms of enrolment in higher education.

2. Gender Parity Index:

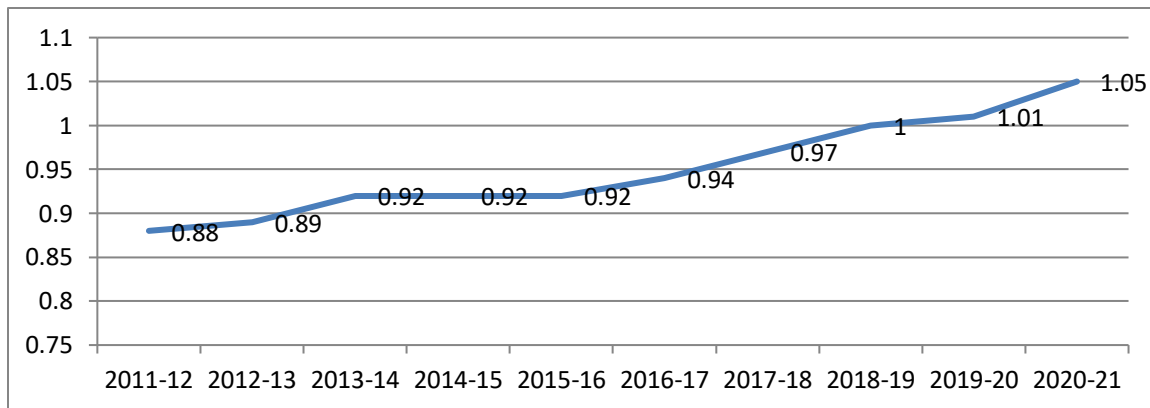
Gender Parity Index is a socio-economic index used to measure ratio of male and female in terms of access to education.

Table no. 2. Gender Parity Index in Higher education (2011-12 to 2020-21)

Years	Gender Parity Index
2011-12	0.88
2012-13	0.89
2013-14	0.92
2014-15	0.92
2015-16	0.92
2016-17	0.94
2017-18	0.97
2018-19	1.00
2019-20	1.01
2020-21	1.05

Source: AISHE Report

Fig 1. Gender Parity Index in Higher education (2011-12 to 2020-21)



Source: AISHE Report

Table no. 2, reveals that Gender Parity Index in higher education in India shows disparity in favour of males from the academic year 2011-12 to 2017-18. But in the 2018-19 to 2020-21 the Gender Parity Index in India shows disparity in favour of females. India witnessed an increase in

Gender Parity Index from 0.86 in the year 2010-11 to 1.01 in the year 2019-20. This indicates that Gender Parity Index moved from favour of male to favour of female in a decade.

Objective 2: To study the trend in gender disparity in enrolment in different streams in Higher Education Institutions in India

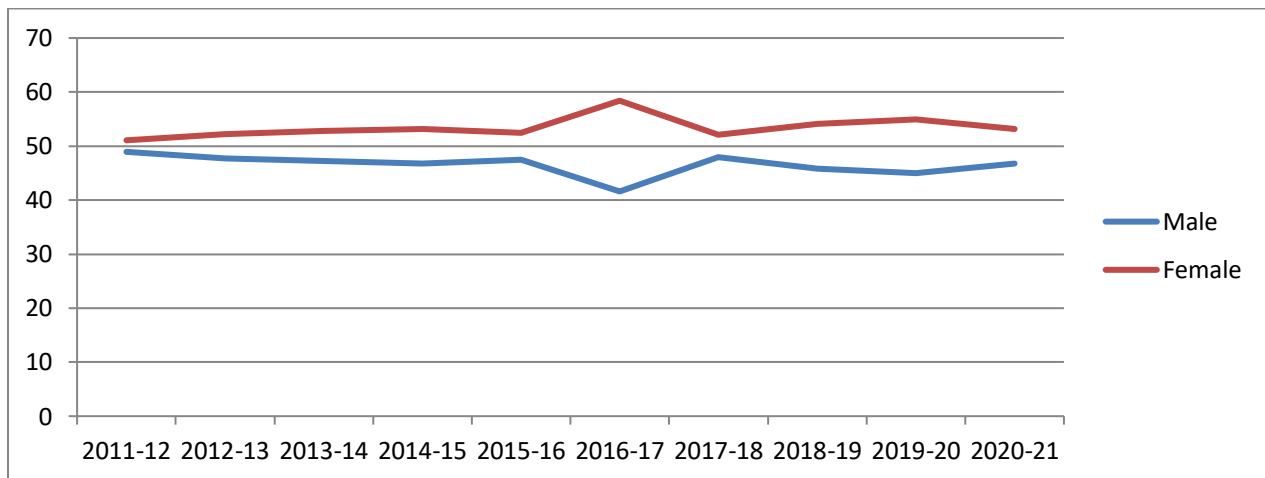
Table no. 3: Percentage of Male and Female Enrolment in Different Streams of Higher Education in India (2011-12 to 2020-21)

Streams	2011-12		2012-13		2013-14		2014-15		2015-16	
	Male	Femal e	Male	Femal e	Male	Femal e	Male	Femal e	Male	Femal e
Social Science	48.9 3	51.07	47.7 5	52.25	47.1 9	52.81	46.8 0	53.20	47.5 2	52.48
Science	50.7 8	49.22	50.8 8	49.12	51.5 8	48.42	52.1 0	47.90	51.5 7	48.43
Commerce	55.2 0	44.80	54.5 2	45.48	54.2 2	45.78	53.4 1	46.59	52.5 5	47.45
Engineering & Technology	71.1 6	28.84	70.8 0	29.20	71.0 3	28.97	71.2 3	28.77	71.4 2	28.58
Medical Science	40.9 7	59.03	41.3 6	58.64	40.6 6	59.34	40.7 3	59.27	40.1 8	59.82
Managemen t	65.4 4	34.56	64.1 7	35.83	63.9 6	36.04	63.4 4	36.56	62.5 1	37.49
Law	67.6 4	32.36	67.4 5	32.55	67.2 5	32.75	68.4 8	31.52	67.9 0	32.10
IT and Computer	59.3 7	40.63	57.7 0	42.30	55.1 4	44.86	54.7 4	45.26	54.8 4	45.16
Streams	2016-17		2017-18		2018-19		2019-20		2020-21	
	Male	Femal e	Male	Femal e	Male	Femal e	Male	Femal e	Male	Femal e

Social Science	41.60	58.40	47.94	52.06	45.84	54.16	45.03	54.97	46.81	53.19
Science	50.99	49.01	49.95	50.05	47.64	52.36	46.89	53.11	43.96	56.04
Commerce	51.20	48.80	51.28	48.72	49.85	50.15	49.71	50.29	46.91	53.09
Engineering & Technology	71.13	28.87	70.98	29.02	70.73	29.27	70.48	29.52	69.59	30.41
Medical Science	39.66	60.34	39.45	60.55	39.65	60.35	41.09	58.91	36.77	63.23
Management	61.27	38.73	61.30	38.70	60.39	39.61	60.10	39.90	57.03	42.97
Law	67.24	32.76	66.18	33.82	65.73	34.27	65.55	34.45	65.27	34.73
IT and Computer	56.10	43.90	56.70	43.30	57.03	42.97	58.02	41.98	59.93	40.07

Source: Own Estimation based on AISHE Report

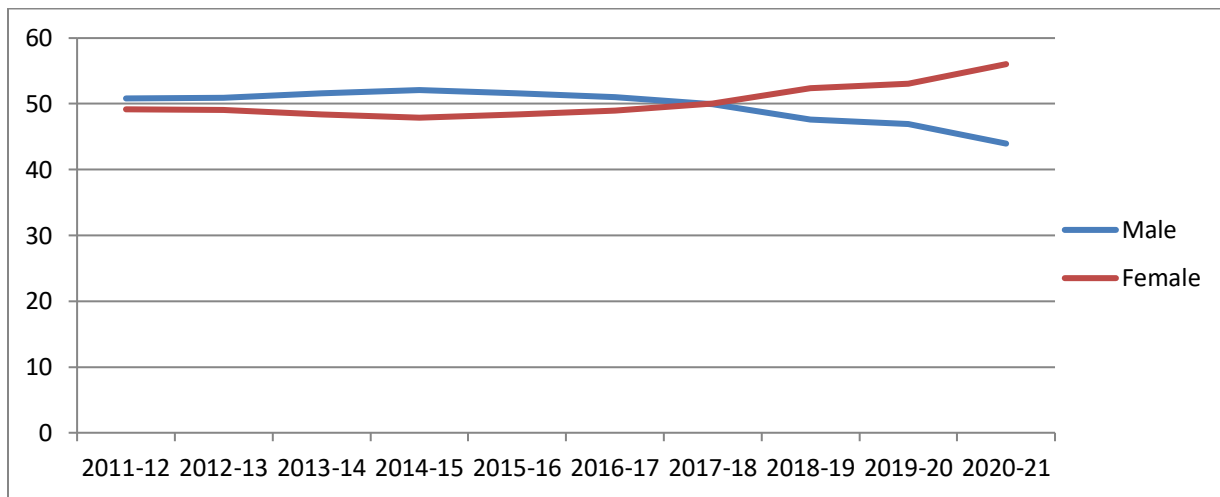
Fig 2. Percentage of Male and Female Enrolment in Social Science Stream



Source: Own Estimation based on AISHE Report

Trend analysis of enrolment in Social Science reveals that in 2011-12, the percentage of enrolment of male in the stream was 48.93 and female was 51.07 and in 2020-21 the percentage of enrolment of male in the stream decreased to 46.81 and female increased to 53.19. The gender disparity curve of enrolment in social science shows that there was no much difference between male and female enrolment in the academic year 2011-12 and the percentage of enrolment of male students were more than female but gradually gender gap in enrolment increased and the percentage of enrolment of female students increased more than male. At present, i.e., in the academic year 2020-21 the enrollment of female students is more than male in social science.

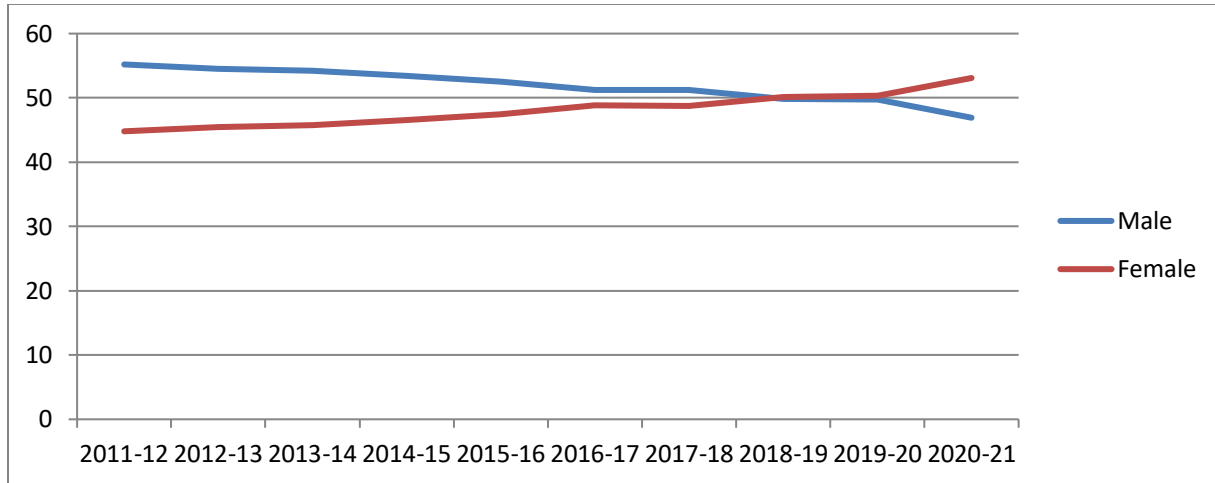
Fig 3. Percentage of Male and Female Enrolment in Science Stream



Source: Own Estimation based on AISHE Report

The percentage of enrolment of male students in Science stream was more than female from 2011-12 till 2016-17 but the percentage of enrolment of female students increased and stood above male during the academic year 2017-18 and continues to increase in the consecutive years. This indicates increased interest of female students towards science stream.

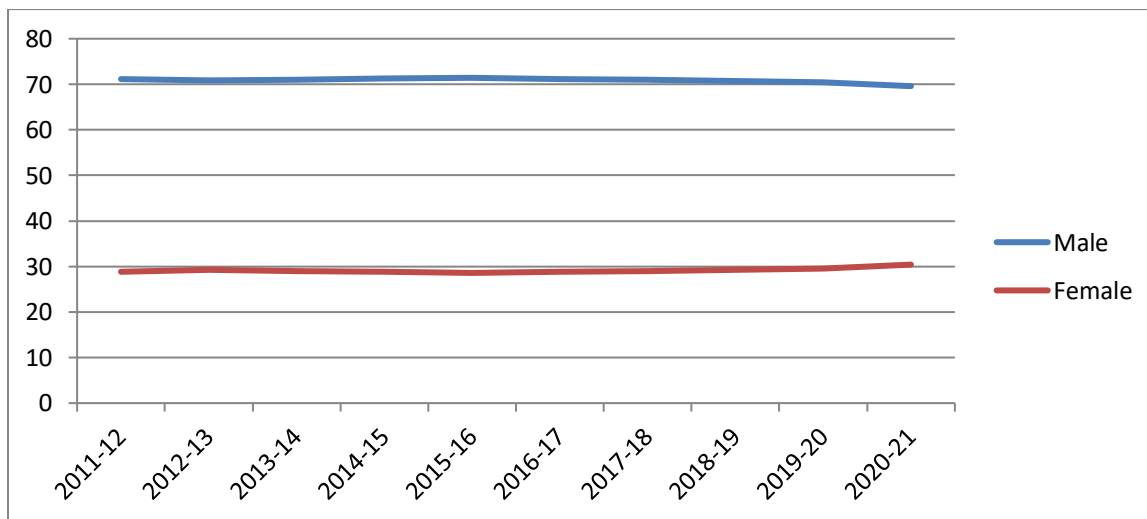
Fig 4. Percentage of Male and Female Enrolment in Commerce Stream



Source: Own Estimation based on AISHE Report

The percentage of enrolment in commerce stream for male students stood more than female from the academic year 2011-12 to 2017-18. But the percentage of enrolment of male decreased and female increased gradually and the percentage of enrolment of female stood more than male from 2018-19 till next consecutive years.

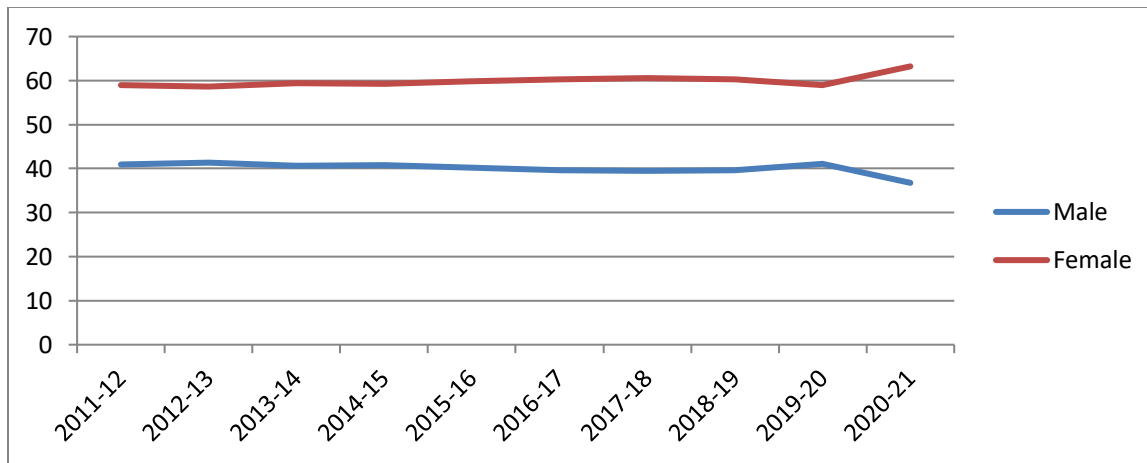
Fig 5. Percentage of Male and Female Enrolment in Engineering & Technology Stream



Source: Own Estimation based on AISHE Report

In the stream, Engineering and Technology, huge gender gap exists in terms of male and female enrolment. The percentage of enrolment of male students has constantly been more than female students since last ten academic years (2011-12 to 2020-21). In 2011-12, the percentage of gender gap was 42.76% and 39.18% in 2020-21. (Calculation based on AISHE Report). This indicates that the enrolment of male students in Engineering and Technology stream has always been much higher than the enrolment of female students.

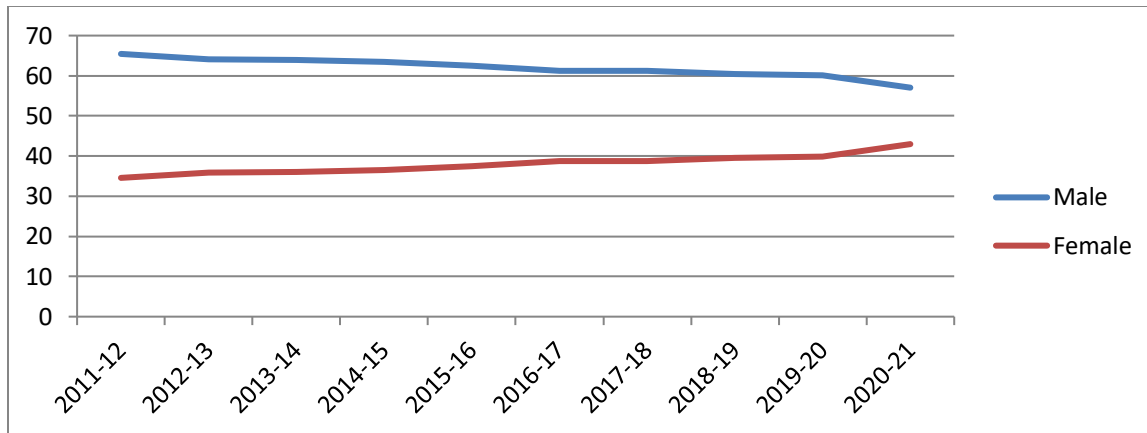
Fig 6. Percentage of Male and Female Enrolment in Medical Science Stream



Source: Own Estimation based on AISHE Report

In the stream, medical science, the percentage of enrolment of female students has constantly been in favour of female students since a decade (2011-12 to 2020-21). The percentage of gender gap in percentage of enrolment in 2011-12 was 20.68% and 26.46% (Calculation based on AISHE Report). This shows that the percentage of enrolment of female student is increasing and male student is decreasing constantly.

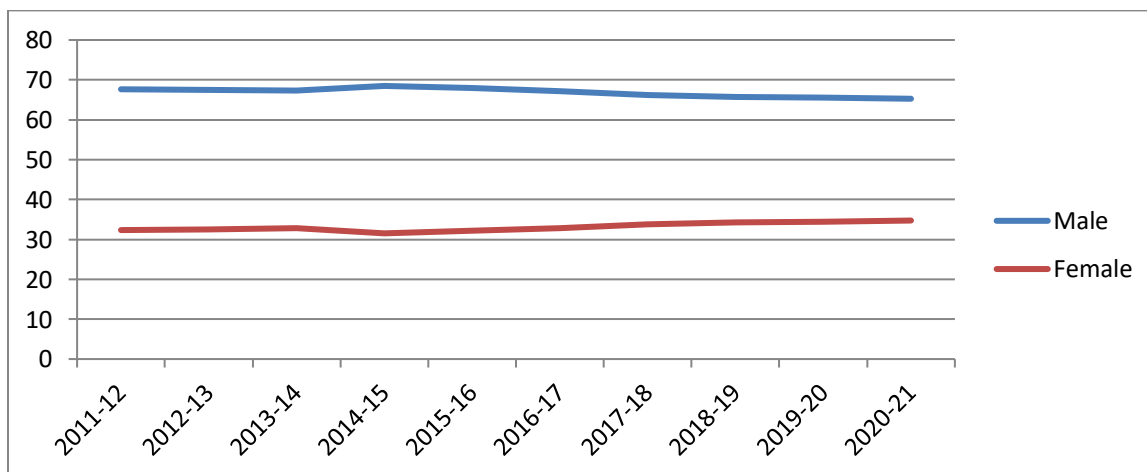
Fig 7. Percentage of Male and Female Enrolment in Management Stream



Source: Own Estimation based on AISHE Report

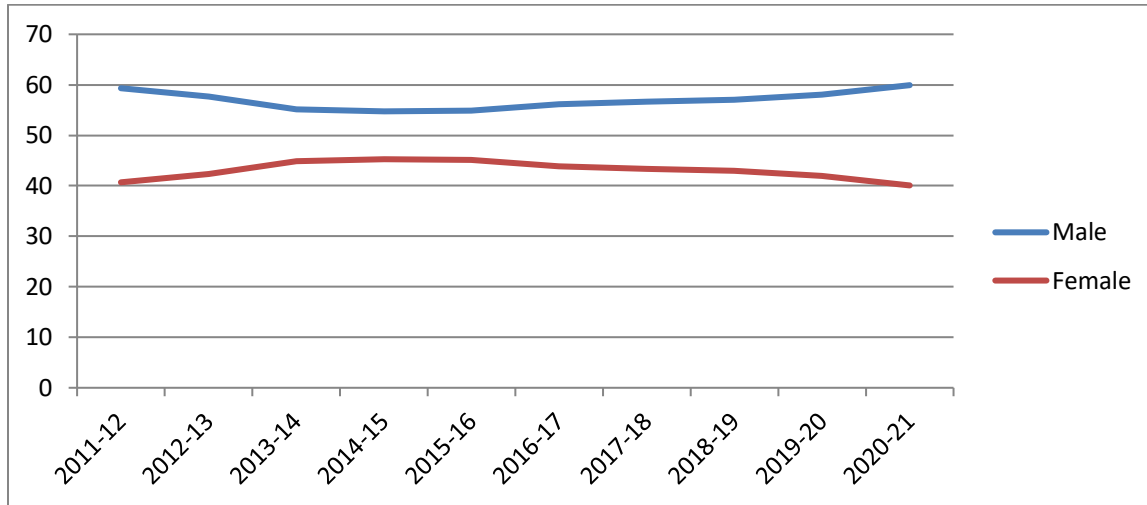
In the stream Management, the percentage of enrolment of male students stood above female for the last ten academic years. But it can be observed from the gender disparity curve that although gender gap exists, it has reduced in course of time. In the academic year, 2011-12, the percentage of gender gap was 30.88% and it decreased to 14.06% in 2020-21. (Calculation based on AISHE Report)

Fig 8. Percentage of Male and Female Enrolment in Law Stream



The percentage of enrolment of male students in Law stream remained more than female for the last 10 academic years (2011-12 to 2020-21). No remarkable change can be observed in terms of percentage of gender gap in the stream. In the academic year, 2011-12 the percentage of gender gap was 35.28% and in 2020-21 it is 30.54%. (Calculation based on AISHE Report).

Fig. 9. Percentage of Male and Female Enrolment in IT and Computer stream



Source: Own Estimation based on AISHE Report

In the stream, computer science the percentage of enrolment of male students has been more than female from 2011-12 to 2020-21. In the academic year, 2011-12 the percentage of gender gap was 18.74 and in 2020-21 it is 19.86. (Calculation based on AISHE Report).

Findings: The findings of the study are as follows:

1. The Gross Enrollment Ratio of female students for higher education has been more than male in India for last three academic years i.e., 2018-19, 2019-2020 and 2020-21.
2. Gender Parity Index of higher education moved from favour of male to favour of female in a decade, i.e., from academic years 2011-12 to 2020-21.
3. Gender disparity exists in terms of enrolment in different streams. The enrolment of female students in Social Science, Science, Commerce and Medical Science are more

than male and the enrolment of male students in Engineering and Technology, Management, Law and IT and Computer are more than female students.

Conclusion:

Gender disparity has been an important topic of study in higher education. It exists at all levels of education. Over the last one decade, the Gross Enrolment Ratio of female in higher education has increased from below male to above male. This may be because of increased popularity/role of women empowerment and gender sensitization in India. Gender disparity exists in terms of enrolment in different streams of higher education. The probable cause may be because of economic reasons as well as gender stereotypes attached to different streams of higher education.

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