

## Extent of Feminization of Medical Education in Bangladesh: A Document Review

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### Abstract

**Background:** In last few decades, there was a trend in medical sector observing with more female admitted into different medical colleges of Bangladesh. So, this research was aimed to investigate the extent of feminization of medical education in Bangladesh. **Methods:** This descriptive type of cross-sectional study was conducted from July'22 to June'23. Data was collected through reviewing the document to find the extent of feminization in last 15 years. **Results:** Out of 73481 seats, 40567 (55.21%) female and 32914 (44.79%) male were admitted in different Government, Non-Government and Armed Forces Medical Colleges of Bangladesh over 10years period. Considering the total number of students graduated, out of 42597 students, 22763 (53.44%) female and 19834 (46.56%) male graduated from different Government, Non-Government and Armed Forces Medical Colleges of Bangladesh. Out of 35993 MBBS graduates registered in Bangladesh Medical & Dental Council (BM&DC), 18411 (51.15%) male and 17582 (48.85%) female were registered. **Conclusion:** The findings of this research hoped to find out the future impact of extent of feminization of medical education on health care delivery system of Bangladesh and possible ways to overcome from such situation.

**Keywords:** Feminization; Medical education; Extension, Health care services; Health professional Education.

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### Introduction

The term 'Feminization of medical education' is referred as the introduction of females in Medicine and medical field with the trends of more females entering into the medical profession.<sup>1</sup> Considering the total

number of world population, about 49.6% are women and they plays a significant role in almost every field, not only in developed countries but also in developing ones.<sup>2</sup> About 32% of medical graduates were female worldwide.<sup>3</sup> In Pakistan, in last few

years about 70-80% seats in different medical colleges were enrolled by the female students which was almost reversed 20 years back scenario and that alarmed the policy makers of this country.<sup>4</sup> Moving from the global trend, in the session 2015-2016 about 48% female students were admitted into the different medical colleges of Bangladesh and in 2013, about 31% of physician registered by Bangladesh Medical and Dental Council (BMDC) were female.<sup>5</sup> In Bangladesh, out of 4,350 seats in government medical colleges, total percentage of female students passed in the admission test for 2021-2022 session was 53.9%.<sup>6</sup> In the 2022-2023 session, out of total of 49,194 students 1885 male and 2345 female students got chance into different government medical colleges of Bangladesh and the total percentage of students passed in the admission test were 57.69% (28,381) female and 42.31% (20,813) male.<sup>7</sup> Russo et al. (2015) mentioned that due to feminization following changes observed in the society in four dimensions, those were patient-physician relationship, change in the local delivery care of health service, in the global delivery of care to the society as a whole in the medical profession it-self.<sup>8</sup> Empirical evidence from developed countries showed

that female physicians work fewer hours, particularly at a younger age, see less patients than their male peers and were less inclined to work in rural areas.<sup>9</sup>

As feminization of medical education is an ongoing process all over the world, so its extent in health care delivery system is an important issue. In Bangladesh, total number female students were admitted into different medical college more than male students in last few sessions. Several factors involve like personal interest, peer pressure, self- motivation, and financial reasons and urge to lead a respectable life plays an important role for female for choosing medical profession.<sup>4</sup> In USA, around 10% of female medical school faculty held the rank of full professor in 1985 and in 2006, 12% of female faculty was full professors and it has taken more than 20 years for the proportion of female faculty who were full professors to increase 2 percentage points. In Canada, women comprise 50 to 60 percent of medical students and it is predicted that by the year 2020 in Canada, female physicians in practice will outnumber male physicians.<sup>1</sup> Furthermore, Bangladesh needs more practicing women physicians especially for conservative rural areas where there was a need to manage female patients. So, this

research was aimed to investigate the extent of feminization of medical education in Bangladesh.

## Methods

This descriptive type of cross-sectional study was conducted from July 01, 2022 to June 30, 2023 after getting ethical clearance from the Institutional Review Board (IRB) of Center for Medical Education (CME). Document reviewing was done for 10 years using purposive sampling to see the extent

of feminization of medical education in Bangladesh from different sources. Estimated sample size was total number of students admitted over 10 years and data was collected from Mapping of Health Professional Education Institutions in Bangladesh: Director General of Health Services (DGHS), Medical Education & health Manpower Development and World Health Organization (WHO) Bangladesh (2018).<sup>10</sup>

## Results

The results of document reviews were given below:

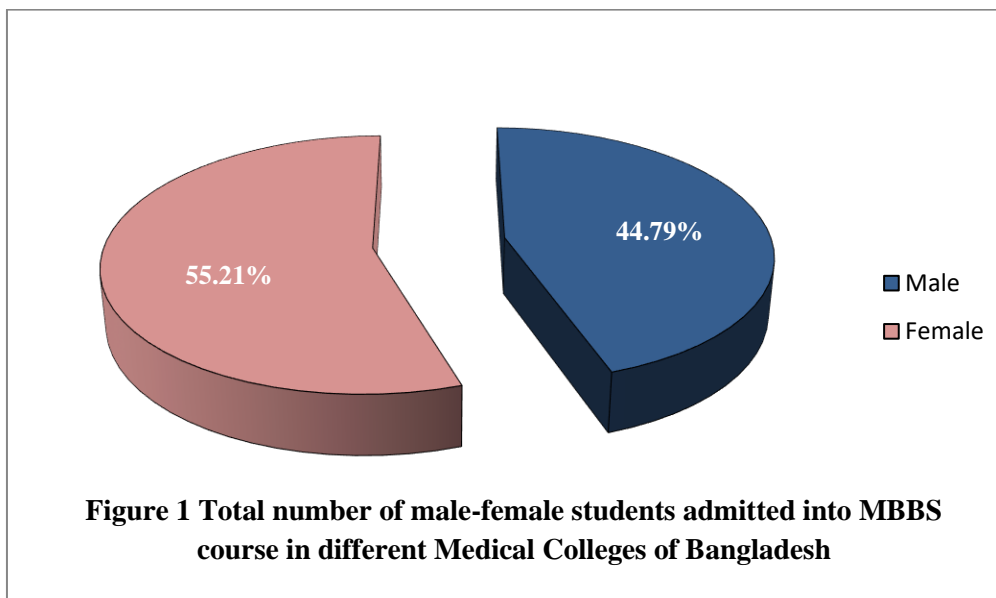
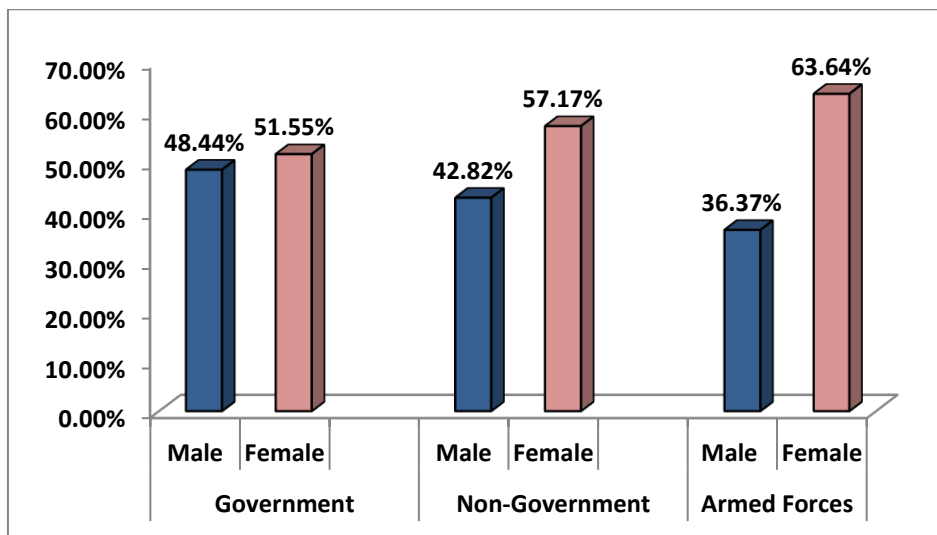


Figure 1 Pie diagram denotes the total ratio of male-female students admits into different medical colleges of Bangladesh. Out of 73481 seats, 40567 (55.21%) female

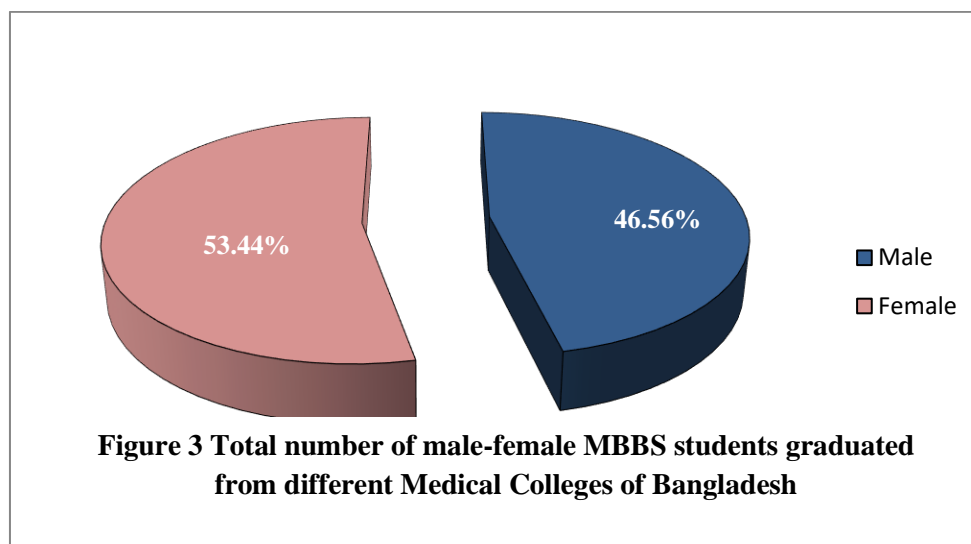
and 32914 (44.79%) male were admitted in different Government, Non-Government and Armed Forces Medical Colleges of Bangladesh.



**Figure 2 Male-female distributions of students admitted into MBBS course in different Government, Non-Government and Armed Forces Medical Colleges of Bangladesh**

Figure 2 Bar diagram shows out of 27915 seats in Government medical colleges during ten years, 14392 (51.55%) were female and 13523 (48.44%) were male students got admitted. Out of 43660 seats in Non-Government medical colleges, 24962

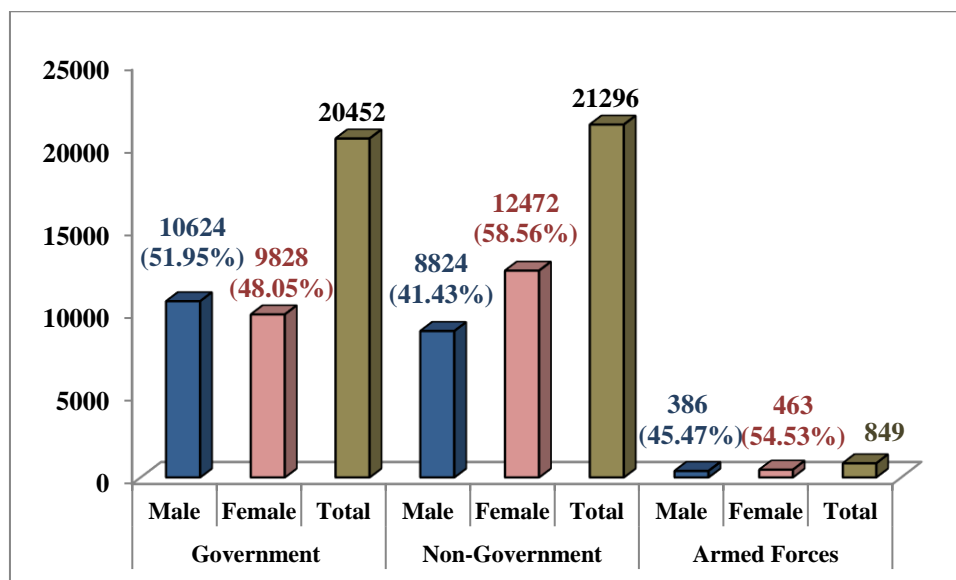
(57.17%) were female and 18698 (42.82%) male students admitted. Out of 1906 seats in Armed Forces medical colleges during 2007-2016, 1213 (63.64%) female and 693 (36.37%) male students were admitted.



**Figure 3 Total number of male-female MBBS students graduated from different Medical Colleges of Bangladesh**

Figure 3 Pie diagram indicates out of 42597 seats, 22763 (53.44%) female and 19834 (46.56%) male graduated from different

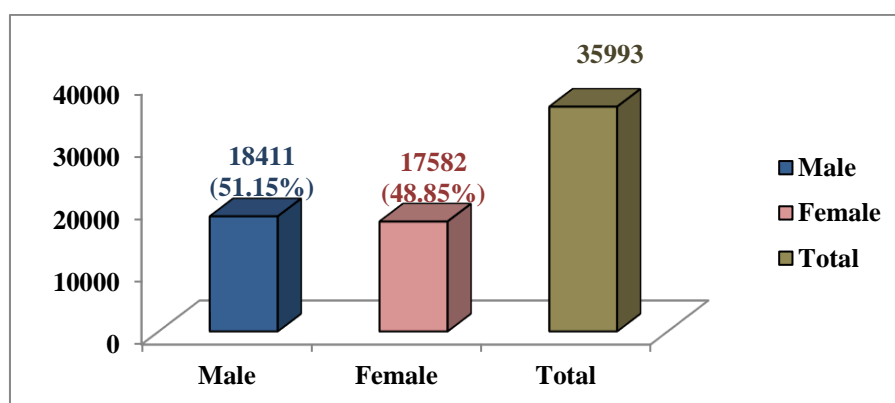
Government, Non-Government and Armed Forces Medical Colleges of Bangladesh.



**Figure 4 Total number of MBBS students graduated from Government, Non-Government and Armed Forces medical colleges of Bangladesh**

Figure 4 Simple bar diagram denotes out of 20452 students graduated from Government medical colleges, 10624 (51.95%) male and 9828 (48.05%) female. On the other hand, out of 21296 students graduated from Non-Government medical

colleges 8824 (41.43%) were male and 12472 (58.56%) were female. In Armed Forces medical colleges, out of 849 graduates, 386 (45.47%) were male and 463 (54.53%) were female.



**Figure 5 Total number of MBBS graduates registered with BMDC**

Figure 5 Simple bar diagram shows out of 35993 MBBS graduates registered with Bangladesh Medical & Dental Council

(BMDC) registration, 18411 (51.15%) male and 17582 (48.85%) female registered.

## Discussion

While reviewing the document it has been found that during 2007-2016, in different Government, Non-Government and Armed Forces medical colleges of Bangladesh more female students admitted than male students (Fig. 2). In total, more half of the seats occupied by female students from 2007-2016 (Fig. 1). A similar study conducted by Fatema et al. (2014) claimed that in last few years about 70-80% seats in different medical colleges of Pakistan were enrolled by the female students.<sup>4</sup> However in 2007, the total number of admitted male and female students was equal but after 2007, more female students were admitted into different medical colleges of Bangladesh.<sup>10</sup> Although it reflects women empowerment but in recent years as same scenario prevail in Pakistan so they adopting a proposal by Pakistan Medical & Dental Council (PMDC) to reserve 50% seats for boys & 50% for girls in admissions to different Medical Colleges.<sup>11</sup>

It has been also documented that during 2007-2016, more female completed/ graduated MBBS course from different Non-Government and Armed Forces Medical colleges of Bangladesh but from Government medical colleges, the number of male graduates out number female

graduates (Fig. 4) and the total percentages of female doctors graduated / completed MBBS course was more than male doctors after combining Government, Non-Government and Armed Forces medical colleges (Fig. 3). On considering the number of BMDC registered doctors, during 2007-2016 more male graduate doctors registered than female (Fig. 5). During 2006–2015, the female physicians outnumbered their male peers (52% vs. 48%), which is also supported by student admission data during 2011–2016 from the sampled medical colleges, (67% in private compared to 52% in public).<sup>5</sup> In United States, in 2003 women comprise 50% to 60% of admitted medical students and it has been predicted that by the year 2020, women physicians in practice will outnumber men physicians.<sup>1</sup> During the past 30 years in Canada, more women entered in academic medicine than previous year but fewer women than men have succeeded in advancing in higher academic rank.<sup>12</sup> In Canada during 2007 female medical students outnumber male medical students about 57.8% of the medical student population<sup>13</sup> which has almost similar scenario like Bangladesh. A higher number of female get general licenses compared to males but in consultants and

specialists levels, more male has been registered than females.<sup>14</sup> First part of this study is similar to our findings but the number of consultants and specialists is not reviewed in the present study. Among all OECD members countries, Japan has lowest percentage of female physicians (18%) and within 2010 there has been increasing in the total number of female

physicians under 30years age and constituted 34% of all registered physician.<sup>15</sup>

### Conclusion and recommendations

The study recommended to utilize female workforce the Government should ensure social security, family support and female friendly workplace all over Bangladesh.

### References

1. Ross, S. The feminization of medicine. *AMA Journal of Ethics*, 2003;5(9), pp.298-299.  
<https://journalofethics.ama-assn.org/article/feminization-medicine/2003-09>
2. Bisnath S, Elson D. Women's empowerment revisited. Background Paper for Progress of the World's Women, A New Biennial Report, UNIFEM. En <http://www.undp.org/unifem>. 2000;1(3):01.
3. Hedden L, Barer ML, Cardiff K, McGrail KM, Law MR, Bourgeault IL. The implications of the feminization of the primary care physician workforce on service supply: a systematic review. *Human resources for health*. 2014 Dec;12(1):1-1
4. Fatima N, Haider AA, Latif F, Raheed S, Ali AS. Problems of female medical graduates during their career in a developing country; pakistan. *Pakistan Postgraduate Medical Journal*. 2014 Jun 1;25(3):91-4.
5. Hossain P, Das Gupta R, YarZar P, Salieu Jalloh M, Tasnim N, Afrin A, Naher N, Hossain MT, Joarder T, Ahmed SM. 'Feminization' of physician workforce in Bangladesh, underlying factors and implications for health system: Insights from a mixed-methods study. *PloS one*. 2019 Jan 11;14(1):e0210820.
6. MBBS admission test results published, Staff Correspondent. *Banglanews24.com*, Update: 2022-04-05 14:10:48.  
<https://www.banglanews24.com/english/education/news/bd/94164.details>
7. MBBS admission test results; Session 2022-2023.

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- <https://www.google.com/search?q=MBBS+admission+results&oq=MBBS+admission+results&aqs=chrome..69i57joi22i30l9.4070563751j1j15&sourceid=chrome&ie=UTF-8>
8. Russo G, Gonçalves L, Craveiro I, Dussault G. Feminization of the medical workforce in low-income settings; findings from surveys in three African capital cities. *Human resources for health*. 2015 Dec;13:1-8.
  9. Koike S, Matsumoto S, Kodama T, Ide H, Yasunaga H, Imamura T. Estimation of physician supply by specialty and the distribution impact of increasing female physicians in Japan. *BMC health services research*. 2009 Dec;9:1-9.
  10. Mapping of Health Professional Education Institutions in Bangladesh: Director General of Health Services (DGHS), Medical Education & health Manpower Development and World Health Organization (WHO) Bangladesh, 2018  
[https://cdn.who.int/media/docs/default-source/searo/bangladesh/pdf-reports/year-2016-2018/mapping-of-health-professional-education-institutions-in-bangladesh-2019.pdf?sfvrsn=8c8bbb63\\_2](https://cdn.who.int/media/docs/default-source/searo/bangladesh/pdf-reports/year-2016-2018/mapping-of-health-professional-education-institutions-in-bangladesh-2019.pdf?sfvrsn=8c8bbb63_2)
  11. Malik, M.A. Feminization of medical education in pakistan. *Journal of University Medical & Dental College*,2014;5(2), pp.iv-iv.
  12. Mayer AP, Files JA, Ko MG, Blair JE. Academic advancement of women in medicine: do socialized gender differences have a role in mentoring?. *In Mayo Clinic Proceedings* 2008 Feb 1 (Vol. 83, No. 2, pp. 204-207). Elsevier. DOI: <https://doi.org/10.4065/83.2.204>
  13. Weizblit N, Noble J, Baerlocher MO. The feminisation of Canadian medicine and its impact upon doctor productivity. *Medical education*. 2009 May;43(5):442-8.
  14. Abuzeyad FH, Al Qasem L, Bashmi L, Arekat M, Al Qassim G, Alansari A, Haji EA, Malik A, Das P, Almusalam A, Abuzeyad MF. Women's contribution to medicine in Bahrain: leadership and workforce. *Human Resources for Health*. 2022 Sep 5;20(1):67.
  15. Ramakrishnan A, Sambuco D, Jagsi R. Women's participation in the medical profession: insights from experiences in Japan, Scandinavia, Russia, and Eastern Europe. *Journal of women's health*. 2014 Nov 1;23(11):927-34.