ORIGINAL RESEARCH

Rising feminisation among students of Kerala Medical Colleges

Praveenlal Kuttichira
Kerala University of Health Sciences, Mulangunnathukavu, Thrissur - 2207613, Kerala

Correspondence to: dr.kuhs@gmail.com

Abstract

Feminisation of medical profession is a global observation which was debated upon considerably. Many indicators of health and development in Kerala are favourable to women. However the extent of feminisation of medical profession in Kerala was not subjected to scientific scrutiny. A Study was conducted to find the extent of female representation in the medical colleges of Kerala and its trend in past decade.

Details of applicants and selected students were gathered from the data base of Commissioner of entrance examinations. The sex ratio of applicants and selected were presented in the back ground of relevant National and State figures.

Sex ratio of applicants and selected students increased between 2002 and 2011. In 2009, the sex ratio of selected students increased over that of applicants.

Women representation among Kerala Medical students is well above the sex ratio of general population in India and Kerala. Increasing feminisation of Medical Profession is to be expected and a rethinking in workforce planning is needed to address the related issues.

Introduction

Current trends indicate that world over the sex representation in medical profession is getting equalised. Entrants to medical school showed a gender balance by 2003 in USA[1] and soon in UK too.[2] Almost half of medical students presently in Korea are females and they will form a majority in near future.[3] Women's advancement in higher education is thought to be the underlying factor in increasing number of female medical students.[3] An average of 60% of student intake across North America, Europe, Australia and Russia are women. They are in the majority in terms of entry to medical schools worldwide and will soon represent the majority of working doctors, 'feminising' the medical profession.[4]

Kerala is known for attaining high Physical Qualities of Life Index. Demographic profile favourable to women and high female literacy rate are other indicators unique for Kerala, distinct from National figures. In this context increasing female representation in the medical profession in Kerala is an expected possibility. Teachers in Medical colleges are aware about more number of female students getting admitted to MBBS courses recently, but the matter was not subjected to scientific scrutiny yet.

This research was aimed to find the extent of female representation among the students admitted to the medical colleges in Kerala, its trend in past decade and to discuss the possible impact of that phenomenon on the health care delivery in future.

Materials and methods

From the data base available with the Commissioner of entrance examinations, total number of applicants and selected students were gathered with their gender details. The number of males and females among the applicants and the selected students were tabulated year wise. From the available data, sex ratio of applicants and selected were calculated as number of females against 1000 males.

In the back ground of sex ratio of male and female at National and State level, the sex ratio of applicants and selected were presented.

Percentage of male and female applicants successful in getting admission to medical colleges from 2002 to 2011 also is presented.

Results

The number of male and female applicants and the selected applicants with their sex ratio are given in the table 1.

Table 1. Number of male and female applicants and selected students with gender ratio arranged year wise

year	applied		Sex ratio	Selected		Sex ratio	% successful males	% successful female
	male	female		male	female			
2000	-	-	-	319	453	1420.06		
2001	-	-	-	338	383	1133.14		
2002	14606	21707	1486.17	364	406	1115.38	0.024921	0.018704
2003	16905	25466	1506.42	401	461	1149.63	0.023721	0.018103
2004	20073	30151	1502.07	528	440	833.33	0.026304	0.014593
2005	21823	32446	1486.78	508	479	942.91	0.023278	0.014763
2006	24097	37270	1546.67	636	645	1014.15	0.026393	0.017306
2007	27837	44384	1594.42	532	551	1035.71	0.019111	0.012414
2008	28857	48946	1696.15	517	681	1317.21	0.017916	0.013913
2009	28333	47034	1660.04	473	822	1737.84	0.016694	0.016694
2010	28284	48242	1705.63	487	823	1689.94	0.017218	0.01706
2011	29886	54888	1836.58	457	1012	2214.44	0.015291	0.015291

Sex ratio of applicants increased from 1486.17 in 2002 to 1836.57 in 2011. The increase was steady except a slight fall in 2004 and a sharp fall in 2005. The sex ratio of selected increased from 1420.06 in 2000 to 2214.44 in 2011. The ratio dropped to 1133.14 in 2001 and steadily increased till a sharp fall in 2004 which remained in 2005 also. The ratio steadily improved since then. In 2009, the sex ratio of selected students increased over the sex ratio of applicants and the trend of upward progression further continued sharply.

The sex ratio of applicants and selected students from the year 2000 to 2011 is presented in figure 1 with the sex ratio of National and State as the background. While the National figures for sex ratio consistently remained below the equal number of 1000, the Kerala figures stayed above it consistently. The sex ratio of applicants always remained at a noticeably higher level, with an upward rise from 2005 onwards. The sex ratio of selected students was just above the State figures in 2001. It fell below the National population figures in 2004.But the ratio steadily rose since then and sharply increased from 2007. In 2009, the sex ratio of selected students crossed the sex ratio of applicants and continued to show a tendency for sharp rise.

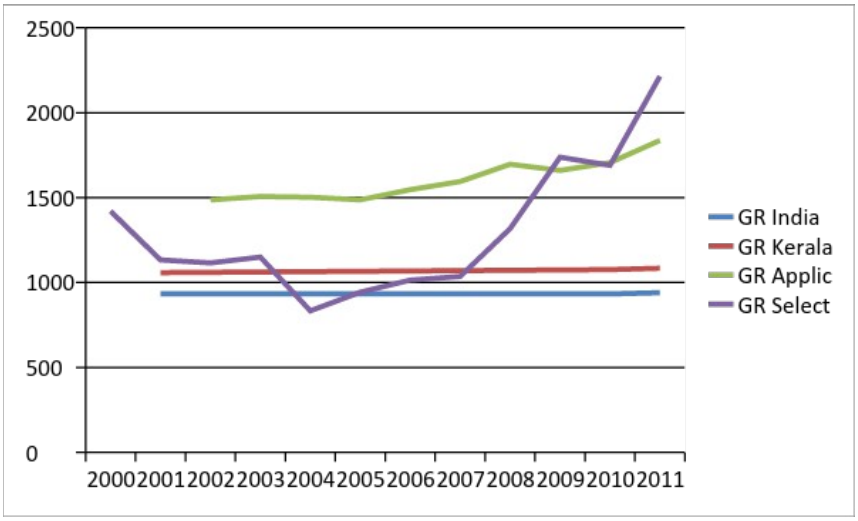

Figure 1. Sex ratio of applicants and students selected for admission in Thrissur medical college against national and state figures

From 2002 to2007, percentage of successful male and female fluctuated within themselves; the female graph remaining below that of male. The male graph continued to dip gradually, but the female graph started rising. In 2009, the graph of successful female improved over that of successful male and continued further up (Figure 2).

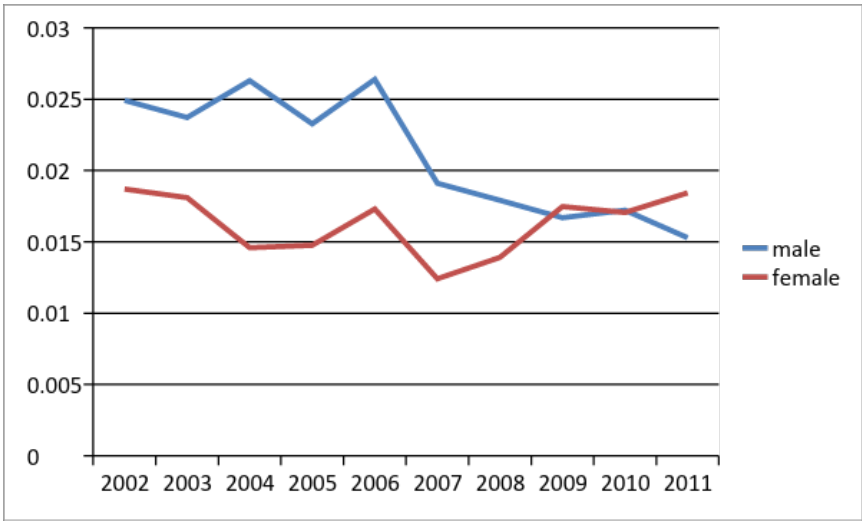

Figure 2. Successful male and successful female medical students from 2002 to 2011

Discussion

The socio-political environment of Kerala favourable to females has its influence on the medical profession too. It is reflected in the increase of female applicants for MBBS courses. Not only the aspiration is rising, but competency also is on rise. That could be the reason for female favoured sex ratio of the selected students outnumbering the sex ratio of the applicants. It could be due to more and more males preferring studies other than of medical stream; for example engineering. That explanation could not be checked in this study for want of appropriate data. Gender refers to aspects of sex related to behaviour and identity, which goes beyond biological differences.[5]

There is an argument that 'as women work only part-time and leave the profession early, increase in female representation will lead to workforce shortage. Women General Practioners (GP) compared to their male colleagues see fewer patients and more likely to refer them to specialists. Both these contribute to the stretching of limited resources, it was argued.[6] Women worked fewer hours and caused decrease in working time productivity of physicians.[7] The risk averse and unhappy with high work pace were deterred from becoming a GP and majority among them were women.[8,9]

But in reality, women bring desirable qualities to medical practice different from men's contribution. 'The more empathic, patient-centred style of women doctors showed better patient outcomes.'[10] 'Women doctors were found to be better adapted to women patients, who demand a "feelings-oriented" consultation style.'[11] They treat

patients with more overt compassion and intimacy than their male colleagues and are more concerned with the psychosocial and communicative sides of medicine.[12, 13, 14 , 15]'Women less frequently attracted complaints than men and were less likely to be punished'.[16]

Females in medical profession face more problems than male colleagues. The female doctors were more likely to experience job burnout than male doctors'.[17] A heavier workload, less personal control, lower satisfaction and longer working hours were found to be independent risk factors for mental distress of practicing obstetricians and gynaecologists.[18]

Women doctors are exploited. 'They were less attracted by pay than were men'[8] and 'the female general practitioners receive a lower income'.[19] 'Women in medicine are given poorer rewards for doing the same job as men'.[20] It is against the norm of equal wages for equal work. The Professional organisations at the time of labour disputes usually favour the hospital management, even though only a few institutions are owned by doctors. In this context, Trade unions and women's organisations do have a responsible role to play among women doctors, specifically to act as a watch dog against exploitation including lower wages.

There are constraints to women doctors for their career progression. They progress through the ranks more slowly and do not readily attain leadership roles, because of structural constraints.[21] 'Medicine continues to fail women with career aspirations through the poor provision of the resources and infrastructure necessary to help them achieve their goal'.[22] The qualifications, profession and status are considered as human capital protection. Still it is not enough to assure equal status to migrant doctors in UK, among whom the most disadvantaged were the women.[23]

Women doctors need different types of support systems. More women doctors rate a supportive environment which includes close friends, as important to their work satisfaction as do their male colleagues.[24]

Even if the sex differences even out as students of today enter the workforce tomorrow, the inequalities in medical culture may persist, maintaining a male dominance.[25].The feminisation of medicine necessitates a rethinking in workforce planning to allow differently configured leadership roles, encouraging women doctors.[10]

Unavailability of doctors in remote areas, concentration of them to city based hospitals etc may be due to the changes happening in the sex ratio. Female doctors

may be avoiding centres in remote places where facilities for bringing up a family are lacking. In big hospitals with many doctors, there will be colleagues with whom one can relate. Organising group practices where doctors of nearby rural clinics are supporting each other may foster the friendship support. Government supported regular Continuing Medical Education Program in rural areas would also of benefit as it will serve the purpose of updating the clinical skills and encouraging friendships. Reserving seats for women in administrative career or academic posts or developing a fast track for promotions exclusively for women are to be considered. Once entry is permitted, they are likely to rise up to meet the required standards. The topic need to be discussed in the academic and other forums to find solutions to avoid women's talents getting sidelined in health care.

Conclusions

Feminisation of medical profession is a global phenomenon. In the last decade it is observed among the students getting admitted to Medical Colleges of Kerala too. The sex ratio of Kerala medical students is well above the sex ratio of general population in India and Kerala. The favourable ratio for women among medical students showed a sharp rise recently. The sex ratio among selected students crossed the ratio of applicants; possibly indicating an increase in the competency level of girls. The possibility for feminisation of Medical Profession in near future necessitates a rethinking in workforce planning; well up to top levels.

Acknowledgements

Sincere thanks to BS Maoji, IAS, Commissioner of Entrance Examinations, Kerala State for permitting the investigator for using the related data.

Harilal, Systems Manager helped in collecting the data. AB Prasad, IT programmer helped in analysing and presenting the data. Rejani, Assistant Professor of Bio Statistics, Government Medical College, Thrissur gave the statistical support. Humayoon Kabeer, Chief Librarian, Government Medical College, Thrissur helped in gathering the relevant references.

References

1. Wolf CV. Women in medicine: an unceasing journey. *Arch Phys Med Rehabil* 2005; **86**:1283–6.

2. Elston MA. *Women and Medicine: The Future*. London: Royal College of Physicians 2009.

3. Chang-Woo Lee· Gender Difference and Specialty Preference in Medical Career Choic. *Korean J Med Educ*

2013;**25**:15-21. English.Published online 2013 March 04. *http://dx.doi.org/10.3946/kjme.2013.25.1.15*.

4. Bleakley A. Gender matters in medical education. *Medical Education* 2013; **47**: 59–70. *doi: 10.1111/j.1365-2923.2012.04351.x.*

5. Matsumoto D, Juang L. *Culture and Psychology*. Wadsworth/Thomson Learning, Belmont 2004 .

6. McKinstry B. Are there too many female medical graduates? Yes. *BMJ* 2008; **336**:748.

7. Bashaw DJ, Heywood JS. The gender earnings gap for US physicians: has equality been achieved? *Labour* 2001;**15**:371-391

8. Birgit Abelsen and Jan A Olsen. Does an activity based remuneration system attract young doctors to general practice? *BMC Health Services Research* 2012; **12**:68 doi:10.1186/1472-6963-12-68 online at: *http://www.biomedcentral.com/1472-6963/12/68.*

9. Walsh Gender. The work-life interface and wellbeing: A study of hospital doctors. *Gender, Work & Organization J* 2013; **20**: 439–453. *doi: 10.1111/j.1468-0432.2012.00593.x.*

10. Dacre J. Are there too many female medical graduates? No. *BMJ* 2008; **336**:749. .

11. Roter D, Hall J. *Doctors Talking with Patients/Patients Talking with Doctors: Improving Communication in Medical Visits*, 2nd edn. Westport, CT: Greenwood Publishing Group 2006.

12. Wolf CV. Women in medicine: an unceasing journey. *Arch Phys Med Rehabil* 2005;**86**:1283–6.

13. Boerma WG, van den Brink-Muinen A. Gender-related differences in the organisation and provision of services among general practitioners in Europe: a signal to health care planners. *Med Care* 2000; **38**:993–1002.

14. Boulis AK, *Long JA. Gender differences in the practice of adult primary care physicians. J* Women's Health 2004; **13**:703–12,28.

15. Roter D, Hall J. *Doctors Talking with Patients/Patients Talking with Doctors: Improving Communication in Medical Visits*, 2nd edn. Westport, CT: Greenwood Publishing Group 2006.

16.Mc National Patient Safety Agency/National Clinical Assessment Service. *Handling* Performance *Concerns in Primary Care,* London: NPSA 2010.

17.Phil JM Heiligers .Gender differences in medical students' motives and career choice. *BMC Medical Education* 2012; **12**:82 doi:10.1186/1472-6920-12-82 online at: *http://www.biomedcentral.com/1472-6920/12/82*.

18.Sugiura-Ogasawara M, Suzuki S, Kitazawa M, Kuwae C, Sawa R, Shimizu Y, Takeshita T, Yoshimura Y for the Japan Society of Obstetrics and Gynecology/Career Support Committee. Career satisfaction level, mental distress, and gender differences in working conditions among Japanese obstetricians and gynecologists. *Journal of Obstetrics and Gynaecology Research* 2012;**38**: 550–558. *doi: 10.1111/j.1447-0756.2011.01765.x.*

19.Magali Dumontet, Marc Le Vaillant and Carine Franc. What determines the income gap between French male and female GPs - the role of medical practices. *BMC Family Practice* 2012;**13**:94 doi:10.1186/1471-2296-13-94. online at : *http://www.biomedcentral.com/1471-2296/13/94.*

20. Fysh TH, Thomas G, Ellis H. Who wants to be a surgeon? A study of 300 first year medical students. *BMC Med Educ* 2007; **19**:2.

21.Buddeberg-Fischer B, Klaghofer R, Abel T, Buddeberg C. The influence of gender and personality traits on the career planning of Swiss medical students. *Swiss Med* Wkly 2003; **133**:535–40.

22.Boerma WG, van den Brink-Muinen A. Gender-related differences in the organisation and provision of services among general practitioners in Europe: a signal to health careplanners. *Med Care* 2000;**38**:993–1002.

23.Franklin Oikelome and Geraldine Healy. Gender, migration and place of qualification of doctors in the UK: Perceptions of inequality, morale and career aspiration. In: Special Issue: Gendered Mobilities and Work in Europe. *Journal of Ethnic and Migration Studies.* 2013;**39**: 557-577.

24.Verlander G. Female physicians: balancing career and family. *Acad Psychiatry* 2004; **28**:331–6.

25.Kilminster S, Downes J, Gough B, Murdoch-Eaton D, Roberts T. Women in medicine – is there a problem? A literature review of the changing gender composition, structures and occupational cultures in medicine. *Med Educ* 2007;**41**:39–49.