

# Medical Specialization, Technological Innovation and Women Doctors

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**Abstract:** In medical profession, most of the women doctors are interested to confine themselves in some less risky and less time consuming specialities. Though there are various technological innovations are going on in medical field, they are underrepresented in most surgical fields, with the exception of obstetrics and gynaecology. In this study, researcher has made an attempt-

1. To find out the specialization of women Doctors in Govt. Hospitals of Assam
2. To examine the factors behind their choice of specialization.

This study has been conducted in four district of upper Assam, i.e., Dibrugarh, Jorhat, Sivasagar and Golaghat. This study is based on both primary and secondary data. For collection of primary data, two methods were used, i.e. Observation and Interview. Findings of the study reveal that most of the women doctors were keen to engage themselves especially in non-clinical and Para-clinical speciality. Various technological inventions in medical science have no effects in their choosing of particular specialization.

**Key Words:** (Women Doctors, Specialization, Technology, Role)

## I. INTRODUCTION

Specialization in medicine has been an inevitable trend for many years and technological innovation gets special place in medical profession now a days. Technology is very significant in some speciality like Obstetrics and Gynaecology, because stethoscope and fetal monitoring techniques unable doctors to know more about condition of patients. In almost all the specialities, technological innovation is most significant. Almost all medical graduates intend to specialize in certain speciality due to competitiveness of the medical practice and increasing demand of specialist professionals across the country. In the modern era, specialization in medical field is heralded by the progressive separation from general practice to Obstetrics and Gynaecology, Paediatrics, Internal Medicine, Surgery and Surgical sub-specialities (Barondess: 2000). The trend of the emergence of various specializations is still going on. The growth of specialism and more recently sub-specialisation in medical field has been natural enough as physicians have been seeking to acquire special expertise in various fields. But research indicates that women are far behind and misrepresented in this race because of their fixed traditional role in the home environment and they are still subjugated globally and they still contribute more to the domestic arena than men (Broadbridge: 2007). Though they are doctors by profession, but for the society they are merely women. Despite the entry of women into the field of medicine that began in the 1970s, women are still underrepresented in higher positions and certain specialities.

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Finding an acceptable balance between career and family is a difficult task for many physicians. It has been found that the difficulties, that concerned with balancing family and medicine affects women's choices of specialty (Bickel: 2000). When specialty choices are examined, women are proportionately overrepresented in the primary care fields and non clinical speciality in government hospitals of Assam. They are underrepresented in most surgical fields. It was found that general practice, community medicine, anaesthesiology, pathology and psychiatry were more popular among female doctors than in case of male and only a few women opted for surgery (Bickel M. & Raffin A: 1995). Some specialities such as, paediatrics and obstetrics and gynaecology tend to be female dominated<sup>1</sup>. Mawardi's (1977) conducted a survey of American women doctors and concluded that 'Being a woman was a prime factor in making the specific career choice'.<sup>2</sup> As women, they have some specific domestic responsibilities along with professional responsibilities. So, in time consuming speciality, they face a lot of problems in maintaining their dual role. On the other hand, only a very few men would still consider it proper to consult women doctor.<sup>3</sup> So, to find out women doctors' choice or preference of speciality and to know the causes behind the selection of such specializations is of utmost significance.

Objectives: In this study, researcher has made an attempt-

3. To find out the specialization of women Doctors in Govt. Hospitals of Assam
4. To examine the factors behind their choice of specialization.

## II. REVIEW OF RELATED LITERATURE

Considering the significance of in-depth study on Women doctors and the causes of specialization, it has to be said with that a very few serious, intensive and academically oriented studies have been conducted, which can be cited as follows:

Fischer (2010) worked on 'The Impact of gender and parenthood on physician's career' and he found that those female physicians who have children showed lower values in terms of career stress than that of the male physicians. In addition, he found that in comparison to their male colleagues, female physicians are less advanced in their speciality qualification; they are less prone to choosing prestigious surgical fields. More often they work at small hospitals or in private practice, they desire less often to join senior hospitals or take up an academic position and they more often consider part time work as more suitable for them.

Black (2011) has done a work on 'Women weakening medical profession'. The findings of her study is that breaking the dominance of medical consultants and 'feminising' this profession is making it less influential for society. According to her, though 60



percent of new doctors are women and they are expected to outnumber men within a decade but sometimes she feels afraid that entry of women in the medical profession could reduce professionalism because according to her observation women tended to specialise in less high status areas of medicine. These women always choose a specialization in Dermatology, Geriatrics, and Palliative Care etc. but not in Cardiology and Gastroenterology. In this work, Carol Black talked especially about underrepresentation of women in some branches of medicine.

Bedoya-Vaca, Derose and Sandoval (2019) has conducted a study on “Gender and physician specialization and practice settings in Ecuador: a qualitative study” and it discusses the gender influence and other factors on physician career decision-making and experiences. This study found that gendered norms regarding women’s primary role in childrearing, along with social class or economic resources, strongly influenced physicians’ choice of medical specialty and practice settings. Women physicians, especially surgeons, have had to “pay the price” socially, often remaining single and/or childless, or ending up divorced; in addition, both women and men face limited opportunities for medical residency training in Ecuador, thus specialty is determined by economic resources and “opportunity”.

The review of literature, pertaining to research works on women in medical profession, cited above was carried out to develop the cognition in the right direction for getting fruitful assistance to deal with the research work.

III. SIGNIFICANCE OF THE STUDY

In medical profession, doctor as professional is one of the challenging and responsible work for both men and women. But women who have accepted this profession, they faced several problems due to societal rules and regulations. The male supremacy of the patriarchal society creates a different kind of reality where women are considered as weak, marginalized and as a low categorized section. They are commonly compelled to go through only some of the low risk works. The career of female physicians is different from their male colleagues. Women seek to establish their professional lives that integrate diverse and conflicting roles. They are affected by work-home conflict due to long working hours and due to traditional nature of society where the family being an important institution, women are expected to give precedence to their family roles and responsibilities. Therefore, most of women doctors are interested to confine themselves in some less risky and less time consuming specialities. Though there are various technological innovations are going on in medical field, they are underrepresented in most surgical fields, with the exception of obstetrics and gynaecology, where women now comprise the majority of practising physicians (Glese Verlander: 2004). So, it is very interesting to find out the root causes of their choice of specialization. This study has focused on the plight of women doctors in government hospitals of Assam. Again, most of the social scientists do not give appropriate emphasis on professional women as research topic. Therefore, considering these, the study on women doctors in government hospitals is very significant.

IV. FIELD OF STUDY AND METHODOLOGY

This study has been conducted in four district of upper Assam, i.e., Dibrugrah, Jorhat, Sivasagar and Golaghat. A total 143 respondents were selected as respondents of the study.

This study is based on both primary and secondary data. For collection of primary data some important method and techniques were used, such as:

- (i) Observation: Non participant observation methods were used.
- (ii) Interview method: a total 243 respondents were selected as respondents of the study by using purposive sampling method. In this study, a structure interview schedule has been prepared to conduct the interview.

For the collection of secondary data, the researcher has used various books, official records, data etc.

V. WOMEN DOCTORS AND THEIR SPECIALIZATIONS

As regards the specialization of women doctors, it has been found in this study that 159(71.30%) women doctors have been working in various specializations and a majority of the respondents have engaged themselves in Non-clinical and Para-clinical speciality.

Table-I: Specializations of Women Doctors

Specialization	Total number of doctors	Percentage
Anatomy	12	7.54
Biochemistry	08	5.03
Community medicine	11	6.92
Microbiology	09	5.66
FSM	02	1.26
Physiology	18	11.32
Pathology	18	11.32
Radiology	05	3.14
Pharmacology	10	6.29
Anaesthesiology	03	1.89
Dermatology	03	1.89
Psychiatry	01	0.63
ENT	04	2.51
Medicine	14	8.80
Ophthalmology	15	9.43
Dentistry	04	2.51
Obstetrics and Gynaecology	10	6.29
Paediatrics	08	5.03
Surgery	02	1.26
Plastic Surgery	01	0.62
Ayurvedic	01	0.62
Total	159	100

So, in context of specialisation, it has been found that 92(57.86%) women doctors have specialization in Non-clinical and Para-clinical areas and only 3 women doctors were found who have specialization in surgery. The rest of the respondents, i.e., 65(29.15%) respondents have a simple MBBS degree.



## Medical Specialization, Technological Innovation and Women Doctors

After completion of graduation, choosing a medical specialty is a very complex decision. An insight into the reasons behind specialty preference and the current trends regarding choice of specialty are important for the planning of the health care system of the country. Various research works have found that women doctors preferred some specific speciality as comfortable to maintain dual role. Though they are involved in this profession, but at the same time they are not free from some customary restrictions which have been imposed on women in the family structure. They never ignore their role in family settings. Women doctors are supposed to play their domestic role as well. The household responsibilities always revolve around them and as woman; they have to play the key role in the house. So, sometimes they face the dilemma of a somewhat contradictory role perception. Physicians are more likely to experience difficulties in balancing work and home life as a result of high physical and emotional demands.<sup>4</sup> Doctors hold a profession that is traditionally connected to very high work commitment. According to gender role theory, women are more likely to see their family role as part of their social identity than men do. (Grandey, Cordeiro & Crouter: 2005). It was found that sex-role socialization affected physicians' work lives and it also affected their experience of stress (Gross: 1992). Though, they are Doctors by profession but at the same time as a woman, they have their own duties and responsibilities at home and they have to maintain both the roles at the same time. In this research work, respondents were asked one question: 'As a woman, which branch of speciality is more preferable to you?' In response to this question, it was found that they preferred different specializations at the post graduation level as per their choice, but very significantly not a single respondent expressed their willingness to prefer surgery as specialization. The following table shows their preferences, as women doctors, for certain specializations.

**Table-II: Preferred speciality of Women Doctors**

Name of speciality	Total	Percentage
Biochemistry	29	13
Physiology	31	13.90
SPM	27	12.11
Anatomy	17	7.62
Microbiology	20	8.97
Radiology	08	3.59
Pathology	20	8.97
Anaesthesiology	08	3.58
Pharmacology	07	3.14
Obstetrics and Gynaecology	14	6.27
Dermatology	20	8.97
Psychiatry	08	3.59
Medicine	05	2.24
Dentistry	03	1.34
Ophthalmology	06	2.69
total	223	100

The study reveals that all the respondents preferred some specific specialization as per their choice and conscience. Therefore, they were asked as to why they preferred these

specializations. Though they were highly educated and were aware of the plight of the global society, but they still hesitated to take more risks as done by their male counterparts. They need equal right and status in their profession no doubt, but they expressed their insecurity in their profession because of high risk. They expressed that too much stress and anxiety in their profession stopped them from taking up difficult activities, like surgery. Therefore, they preferred a less risky and comfortable specialization as part of their career. In this study, it was found that out of the total respondents, a majority of the respondents, i.e., 163(73.09%) preferred non-clinical and Para-clinical subjects as suitable for women to maintain dual role. Though it has been found that 60(26.91%) respondents preferred clinical specialities as suitable for women, but interestingly, they mainly preferred less risky and less time-consuming specialities. Women felt that they were especially suited to the following branches of clinical practice: Dermatology, Pathology, Paediatrics, Dentistry, Ophthalmology, Psychiatry etc. but not Surgery and Orthopaedics. They expressed that though there are various technological innovation takes place in medical science, still they preferred less time consuming specialities.

Further, an attempt has been made in this study to find out the causes of choosing a specialization on the part of the respondents. Various studies found that doctors opt certain specializations due to various reasons such as competency of individual, gender, chances of high income, personal interest, intellectual contents of the subject, inspiration from role model etc (Aasland, Rovik & Janssen: 2008). The personal circumstances and gender were also found to be important factors of speciality selection (Batenburg, Smal, Lodder: 1999). In this study, it has been found that women doctors liked to concentrate with certain specialities which they considered as suitable for them. In this study, 6(3.77%) respondents informed that they selected their specializations as they considered those areas to be less risky. It was clearly observed that the women doctors generally never prefer night duty and wish for less interaction with their patients. They even like to keep themselves away from any complicated and risky situation. So, they always want to be more secure at the workplace in all respects. The speciality which is concerned with major surgery or any other difficulties at macro level is considered as uncomfortable practice for them. Again, the women doctors were too concerned about their workload. They face difficulties while coping with heavy workload as they have to maintain dual role. Women in patriarchal society still today may or may not be service holders yet; they must and have to play several significant roles at home.

Moreover, it has been found that workload is a more important reason for women than for men to reject an alternative career (Lambert, Goldacre & Turner: 2003). In this study, it has been found that workload affects the working hour of women doctors. Though in government hospitals, doctors have fixed working hours, but they have also emergency duties according to their workload. In this context, 15 (9.43%) respondents viewed that they selected their speciality which required less working hour. They opined that as women, they have to play dual role, professional role and household responsibility, at the same time. They mentioned that they chose those specialities which have fixed working hours since the working hours in that field would be friendly





to maintain a comfortable lifestyle.

In this study, the women doctors talked about shortage of mentors in some specializations which makes it difficult for them to train themselves with proper infrastructure. There is even a lack of necessary positive aspiration from mentors to select some specializations. In this study, 15(9.43%) respondents reported that only because of limited mentorship in some speciality, they were bound to select certain speciality not of their choice or preference. Nowadays, a number of women enter the profession of medicine but it does not lessen the problem of a lack of female role models and absence of women in leadership positions. According to a study by the American Medical Women's Association, 'opportunities available to female protégées would increase if medical schools promoted more women to authority positions.'<sup>5</sup> In medical profession, women's career advancement greatly facilitated and accelerated by the help of mentor. Because women constitute a minority of physicians in comparison to male doctors and because of small minority of women in some specialties, they experience professional loneliness and isolation that can significantly undermine their sense of comfort, confidence, and belonging (CEJA Report G-A-93). Mentorship can provide a valuable resource to young physicians, providing contacts, inside information, and other intangible aids to success.<sup>6</sup> Mentors have significant impact on one's professional advancement and success of a physician also depends on his/her mentor who promotes, protects and in other ways enhances his/her professional fortunes. With few female mentors and role models, many women physicians hesitate to select certain specialities. There is often an unwillingness or anxiety on the part of men to act as mentors for women (CEJA report G-A-93). Unfortunately, there are few departments in any medical school 'in which a student can readily find a woman physician in a senior position who is happy with both her professional life and her personal life and available to give the student pointers and support.'<sup>7</sup> This absence has a generally harmful effect on the emerging female medical professionals. In this study, two respondents who have specialisation in Medicine viewed that though they have interest in Surgery yet, due to lack of women mentorship, they were unable to specialise in Surgery and were bound to concentrate in Medicine. Again, the rest of the respondents, i.e., 16 viewed that due to lack of women mentors available in their interested specialities, they were now therefore specialising in alternative specialities. They said that sometimes they suffered from frustration due to their inability to become MD in their interested area.

Again, 100(62.89%) respondents mentioned that they selected their speciality according to their own choice. Among them, 12(12%) respondents reported that they selected their speciality due to its scope for private practice. They mentioned that some subjects have more scope for private practice. According to them, the salary provided by government to doctors is not sufficient to meet their needs. So, considering such insufficiency, they expressed that private practice is most essential for a good income. Moreover, 10(10%) respondents mentioned that they selected their speciality because they anticipated a high income generation. They said that a doctor's profession is looked at as a lucrative profession for its good income. They opined that at present, the high price of commodities compels them to think about extra income by doing private

practice. They even stated that nowadays the demands of specialised doctors are increasing day by day. So, they become specialist in their area so as to find out a good way for anticipating high income. Again, various studies found that role models and internship experience are the main factors associated with the choice of a medical specialty (Griffith, Georgesen & Wilson: 2000). In this study, 4(4%) respondents viewed that they were inspired by some persons from their family and society, whom they considered as role models. Among these, 3(75%) respondents expressed their full gratitude towards their relatives who had established themselves as reputed and respected doctors in the specialization of medicine and inspired them to become specialists in the field of medicine. On the other hand, one respondent (25%) mentioned a neighbour who was a doctor in gynaecology and inspired her to be a specialist in Obstetrics and Gynaecology. Moreover, 4(4%) respondents viewed that they became specialist in their area due to the experiences gathered during their internship period. Furthermore, 10(10%) respondents opined that they selected their specialization to be an academician in the respective fields. Again, 6(6%) respondents viewed that they selected their speciality due to rarity of that particular speciality in their locality. Furthermore, 05(5%) respondents expressed that they were motivated to opt for their specialization because of certain incidents which took place in their localities. They shared some pathetic experiences where even some of their close relatives died due to non-availability of specialised doctors in their places. They regretted that there was not much provision for students to opt for these specializations. In this study, the rest of the respondents, i.e., 49(49%) selected their speciality because of their interest in them from the very beginning when they had joined the medical course.

Moreover, in this study, 4(2.51%) respondents reported that they selected their speciality according to the interest of their parents. Out of 4 respondents, 2(50%) viewed that initially they did not have any interest in the medical profession but it was their parents who constantly forced them to be doctors. As a result, they became doctors but wished to choose Obstetrics and Gynaecology as their specialization at post graduate level. They successfully managed to get the seats in these departments but again their parents compelled them to join the department of paediatrics. In the same way, another respondent was compelled to give up her aim in life and instead joined the medical profession. She showed her interest in creative writing and achieved acknowledgement at school level from her mentors and some other literary figures but her parents forced her to become a Dentist. Again, one more respondent (25%) mentioned that though she was interested in Surgery yet, her family members forced her to be a specialist in Ophthalmology since it is a less risky and less time-consuming speciality.

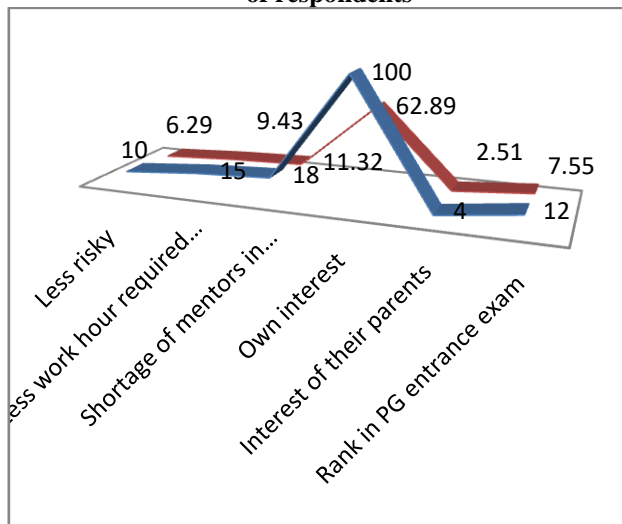
Furthermore, the rest of the respondents, i.e., 12(7.55%) mentioned that they were compelled to opt speciality according to their performance in the Post Graduate entrance exam. In India, merit (PG rank) in post graduate (PG) entrance examination is an important determining factor.<sup>8</sup> Very often, students are bound to choose a specialty without their interest in it. In this study, respondents mentioned that it is a very difficult task for anyone to get a specialization of their own

choice. They informed that the medical profession is very competitive and they got their speciality according to their rank in the entrance examination. Out of 12 respondents, 5(25%) respondents viewed that though they had interest in clinical subject, but their PG rank placed them in Microbiology and Physiology. Only one respondent said that she was interested in specialising in Allopathic, but due to PG entrance exam, she was now interested to get admission into MBBS course which consist of contents of Allopathic medicine but unfortunately she failed to manage her seat in the MBBS course and therefore, took admission in the BHMS course. This course covers only Ayurvedic medicine. As she got a low rank in the medical entrance, she was bound to find her place in Ayurvedic College. The rest of the respondents, i.e., 6(50%) also expressed their discontentment regarding their area of specialization, as they were bound to concentrated according to PG entrance exam. This study basically focused on women doctors' specialization and the reasons behind the choice of their specialization at post graduate level. Considering this, the respondents were asked about the reasons for choosing their specializations and the following table indicates their responses in this context.

**Table-3: Reasons for the choice of specialization by Women Doctors**

Reasons for choosing specialization	Total number of respondents	Percentage
Less risky	10	6.29
Less work hour required	15	9.43
Shortage of mentors in some specialities	18	11.32
Own interest	100	62.89
Interest of their parents	04	2.51
Rank in PG entrance exam	12	7.55
Total	159	100

**Figure-1: Reasons for choosing specialization on the part of respondents**



The above diagram depicts that a majority of the respondents, i.e., 100(62.89%) choose their speciality according to their own interest. But at the same time, it was found that a majority prefer certain specializations in which they can avoid high risk. They also thought about the factor of time and they preferred the less time-consuming speciality.

## VI. CONCLUSION

From the above findings, it was revealed that though a majority of the respondents preferred a doctor's profession as suitable for women, but most of them were keen to engage themselves especially in non-clinical and Para-clinical speciality. Various technological inventions in medical science have no effects in their choosing of particular specialization. Women doctors preferred some less risky and less time-consuming speciality as suitable for them to maintain their dual role at home and the workplace. They felt that women are suitable for some specific specializations such as gynaecology, paediatrics, psychiatry etc. but not suitable for Surgery or Orthopaedics etc. Of course, though the women doctors in government hospitals in Assam were interested in less risky and less time-consuming speciality because of their dual role yet, all of them were confident of their professionalism. All of them considered themselves as very dedicated and ready to render service for the required working hours according to the demands of their profession.

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