## Possible impact of increase in female medical student admissions in Nepal:

## Findings from a qualitative study among medical undergraduates

## PR Shankar, KK Singh, S Singh

## KIST Medical College, Lalitpur, Nepal

## RESEARCH


#### Abstract

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Corresponding Author:
Dr. P. Ravi Shankar
KIST Medical College
P.O. Box 14142

Kathmandu, Nepal.
Email: ravi.dr.shankar@gmail.com

## Abstract

## Background

In Nepal, a developing country in South Asia, the number of female medical students has increased significantly.
Aims
The present study was carried out to explore perceived perceptions for this increase, study the perceived impact on teaching-learning activities, medical school infrastructure and possible perceived changes in the doctor-patient relationship.

## Method

First, second and third year students were invited to participate in focus group discussions (FGDs). Fifty-four students were willing to participate. Twenty-five were from the first year, 20 from the second and 9 from the third year.
The FGDs conducted over a 90 minute period were voice and video recorded. The groups consisted of both males and females from a particular intake. The findings were transcribed verbatim.
Results
Participants felt more female students were taking up medicine in the country because of more colleges opening in the cities and towns making it easier for female students to enrol in the course. Also parents consider medicine as a safe, noble and dignified profession for their daughters. Participants suggested women are more empathetic doctors
and the doctor-patient relationship might become more patient-focused. Women doctors can serve as a source of inspiration and the overall impact on Nepal would be positive.

## Conclusion

Participating students perceived the increasing number of female medical students may be due to changes in Nepalese society. This study was carried out only among three batches of students in a single medical school. Further studies among different batches of students and among interns in other medical schools are required. Studies among postgraduate students and doctors are also needed. Key Words
Developing nations, doctor-patient relationship, Nepal, teaching-learning activities, women medical students

## What this study adds:

1. What is known about this subject?

The number of female medical students is increasing all over the world and recently an increasing number of female students have been joining medical school in Nepal.
2. What new information is offered in this study? In this study information about possible reasons for the increase in Nepal, and the perceived impact of the increase on teaching-learning activities, medical school infrastructure and the doctorpatient relationship is offered.
3. What are the implications for research, policy or practice?
Student participants perceived the increasing number of female medical students may be due to changes in Nepalese society and there could be implications for healthcare delivery especially in rural Nepal. The perception of the participants was that female students are less likely to serve in rural areas due to various reasons. They are likely to be more patient-focused and could bond better with women and children if they serve in rural Nepal.

## Background

In many developed nations like the United Kingdom (UK), female doctors will soon form the majority of the physician workforce. ${ }^{1}$ In the Netherlands in 2007, $40 \%$ of all physicians and $34 \%$ of all specialists were female, and it is expected that by $2027,66 \%$ of all physicians will be female. ${ }^{2}$ A four-nation study published in 2002 conducted in the developed nations (Australia, Canada, England and the United States (US)) showed that women make up half of all medical students and $30 \%$ of all practicing physicians. ${ }^{3}$ Recent research conducted in the UK shows women prefer part-time and flexible working arrangements especially in the early years after qualifying, and prefer some specialties over others and are under-represented in leadership positions. ${ }^{4}$ In the UK female doctors are well represented in paediatrics, obstetrics and gynaecology, and accident and emergency medicine. Female doctors' career profiles follow an M -shaped curve with a peak in the early years, a dip in the middle with a potential for a peak in later years. ${ }^{5}$ Women taking time off for child bearing and raising their families may partly account for this curve. The author Allen recommends that career paths should be flexible and women should not be prevented from realising their potential. The number of women in surgery is low and a recent review concluded that early negative experiences and lack of encouragement in medical schools could be possible reasons for the same. ${ }^{6}$ Gender differences in choice of specialties were also noted in a study conducted in Kenya. ${ }^{7}$ Male students were in favour of surgery while female students mainly selected paediatrics.

Studies have suggested female medical students may have higher empathy than males. ${ }^{8,9}$ Higher perceived levels of empathy among doctors have been shown to be associated with increased patient satisfaction. ${ }^{10}$ Thus increasing numbers of female doctors may be a positive development as seen from the perspective of doctor-patient relationships. There continue to be a number of problems for women in medical school. These are harassment and sexual misconduct by both male students and teachers, few women faculty members, and less emphasis on women's health curricula. ${ }^{11}$ Female medical students consistently reported less confidence in their abilities and more anxiety than males despite performing either equally or exceeding their male counterparts in knowledge and skills. ${ }^{12}$ An overview of the literature published in 1986 notes that research at that time was limited and concluded women tend to cluster in a few specialties, choose urban locations more frequently, prefer salaried and institutional jobs and belong less frequently to medical associations. ${ }^{13}$

Nepal is a small developing country in South Asia situated between two Asian giants, China and India. At the beginning of September 2011 the country had 18 medical schools with all except four being in the private sector. ${ }^{14}$ Like other countries in South Asia, Nepal is a patriarchal and maledominated society though recently the status of women has improved significantly. ${ }^{15}$ In Nepal students join medical school after 12 years of schooling with the subjects of physics, chemistry, biology and English in the last two years. The course is of four and half years' duration with one year of rotating internship. The medium of instruction is English. During the first two years students learn the six basic science subjects of anatomy, physiology, biochemistry, pathology, microbiology, and pharmacology along with community medicine and early clinical exposure. In Nepal the number of female students in medical schools has increased significantly in recent years. At KIST Medical College (KISTMC), a private medical school in Lalitpur district of the Kathmandu valley, women make up over $40 \%$ of the students. Studies of the reasons for and possible impact of increasing numbers of female medical students have not been conducted in Nepal and other developing countries. Hence the present study was conducted with the following research questions:
a) To explore possible perceived reasons for the increasing number of female medical students at KISTMC and in Nepal generally
b) To study perceptions of possible impact on curriculum delivery and infrastructure requirements in the medical school and
c) To obtain information on participant perceptions regarding possible changes in the doctor-patient relationship and the health system

The perceptions of student participants in focus group discussions regarding these issues were studied.

## Method

The authors analysed the literature using widely available databases such as PubMed, HINARI database and Google Scholar to identify studies conducted and writings about female doctors in the literature. Findings from these studies were used to develop a discussion guide for focus group discussions (FGDs) to explore the impact of the increasing number of women students in medical schools. The discussion guide was also shared among members of the Institutional Review Board (IRB) of the college and comments obtained were incorporated.

The study was a descriptive one using a qualitative approach. First, second and third year students were
informed about the study and invited to participate. The institution is a new medical school which admitted its first cohort of students in November 2008. At the time of the study three intakes of undergraduate medical (MBBS) students (a total of 275 students) were studying in the institution. The IRB stressed the importance of enrolling only students who were genuinely interested in participating and not coercing or inducing any student to participate. A total of 54 students ( $19.6 \%$ of the enrolled student population) participated. Students from all years of study, of both genders, and both scholarship and selffinancing students were invited to participate. As shown in Table 1, the percentage of first years participating in the study was more than that in the student population while the percentage of third years was lower. The percentage of female students, and scholarship students participating in the study was higher than in the student population. This can influence the generalisability of the results to the student population.

Table 1: Demographic characteristics of students who participated in the focus group discussions

| Characteristic | Number | Percentage of total ( $\mathrm{N}=54$ ) | Number in the entire medical school population ( $\mathrm{N}=275$ ) | Percentage |
| :---: | :---: | :---: | :---: | :---: |
| Year ofstudy |  |  |  |  |
| First | 25 | 46.3 | 100 | 36.4 |
| Second | 20 | 37 | 100 | 36.4 |
| Third | 9 | 16.7 | 75 | 27.2 |
| Gender |  |  |  |  |
| Male | 23 | 42.6 | 157 | 57.1 |
| Female | 31 | 57.4 | 118 | 42.9 |
| Method of |  |  |  |  |
| financing |  |  |  |  |
|  |  |  |  |  |
| education |  |  |  |  |
| Scholarship | 8 | 14.8 | 28 | 10.2 |
| Self- | 46 | 85.2 | 247 | 89.8 |
|  |  |  |  |  |

Each discussion group had both male and female and scholarship and self-financing students. The first and second year students study the basic science subjects (anatomy, physiology, biochemistry, pathology, microbiology and pharmacology) in an integrated organ system-based manner along with community medicine. The students spend four hours a week in the hospital as part of early clinical exposure and concentrate on history-taking skills during the
first year and physical examination skills during the second. A medical humanities module (Sparshanam) is also conducted for first year students. Self-financing students have to pass (obtain more than 50\% of available marks) in an entrance examination conducted by Tribhuvan University to which the college is affiliated. Scholarship students are selected on basis of ranks obtained in an entrance examination conducted by the Ministry of Education.

The study was approved by the IRB of KISTMC. All participants were fully informed about the study aims. The FGD was conducted in the pharmacology practical room which was agreed as convenient by all participants. Participants completed a written informed consent form. The FGDs were conducted over a 90 minute period with two breaks of five minutes. Coffee and biscuits were served during the FGDs to create an informal and relaxed atmosphere. The authors have previously obtained feedback from students. We emphasise the importance of providing free and frank feedback about teaching-learning activities and other issues. FGDs were facilitated by the first author (PRS) and the other two authors were also present and acted as rapporteurs. FGDs were conducted in English and were video recorded with the permission of the participants. Students were divided into FGD groups according to their years of study. There were two FGD groups from the first and second year and only one FGD group from the third year. Two FGDs were conducted with each student group. The groups were organised year wise as the students of a particular intake are more familiar with each other helping in group dynamics and more free and frank discussion.

FGDs were organised around the following main areas: increasing number of female students and possible reasons for the same, impact on teaching-learning activities and the medical school, impact on the doctor-patient relationship, impact on the health system and impact on society. Table 2 shows the FGD guide used in the study. The first author moderated the FGDs. In each broad topic area the issues (points) were decided by consultation among the authors. For example in the first topic 'increasing number of female students' the discussion was initiated with a question about whether participants felt the number of female students was increasing in medical schools in Nepal and in the Kathmandu valley. Participants were also asked what they felt could be possible reasons for the same. Before going on to the next topic participants were asked if there were any further areas they felt should be discussed about the particular topic. The findings were transcribed verbatim by a qualified transcriber from the recordings. The researchers checked the transcripts, confirmed them, carried out
corrections where required and sent them to the participants for endorsement as part of the validity process. The main authors then coded the interview transcripts to capture themes and components related to study objectives. Coded segments were retrieved from the interviews by theme, and segments were placed in thematic areas that emerged from the interview analysis. After the initial coding was completed, the authors returned to the interview transcripts to develop focused codes that represented the major theoretical categories and subcategories in the study. Data is presented by thematic or conceptual areas, with the goal of the study to explain those conceptual categories.

Table 2: FGD guide used in the study:

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Increasing number of female students in KIST Medical
College and Nepal
Reasons for the same
Teaching-learning & medical school:
Impact on classroom sessions
Impact on practical and clinical sessions
Possible impact on small group dynamics
Impact on men students
Relationship with male and female teachers
Impact on sports, hostels and other
facilities Doctor-patient relationship:
Possible impact on the doctor-patient relationship
Women students and healthcare delivery in rural Nepal
Acceptance of female doctors by the general public
Female doctors and empathy
Female doctors and style of doctor-patient relationship
Health system:
Female doctors and rural service
Female doctors and emigration
Female doctors and women and children patients
Balancing career and family
Which specialties are females more likely to go into
Female doctors and pharmaceutical promotion
Preferred working conditions
Society:
Status of women
Motivating for healthy lifestyle
Impact on Nepal
Any other points
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## Results

Fifty-four of the school's 275 students (19.6\%) participated in the FGDs. Table 1 shows the demographic characteristics of student respondents. Twenty-five respondents (46.3\%) were first year MBBS students. Of these 11 (44\%) were males and 14 female. Three were scholarship students while 22 (88\%) were self-financing. Of the 20 second year
students 9 (45\%) were male and 11 were female while 4 ( $20 \%$ ) were scholarship and 16 were self-financing. Of the nine third year students who participated three (33.3\%) were male and only one was a scholarship student.

Upon analysing the transcripts of the FGDs eight main themes emerged. These were: reasons for increasing number of female students, possible impact on teachinglearning activities, impact on college infrastructure and facilities, effects on doctor-patient relationships, effects on the health system, personal issues of female doctors, pharmaceutical promotion and relationship with nurses and impact on other women and the country. The direct quotes of the participants have been placed in italics and in inverted commas. These are discussed below.

## Increasing number of female students and reasons:

Respondents felt the number of female medical students is increasing in Nepal. They believed that 40 to $50 \%$ of students were young women. In Nepal students after 10 years of schooling take up either the biology stream (if they want to go for medicine) or the mathematics stream (for engineering). In most high schools the number of young women doing biology is high. Parents are more concerned about the safety of their daughters and as many medical schools have started in Nepal recently they can enrol daughters in a school near their home. Also parents are educated and realise the value of education for young women. In urban areas they are willing to fund their daughter's education. Medicine demands less physical work and the government is strongly encouraging the education of young women. Young men have more career options they felt, and can go abroad for education and jobs. Also an educated girl may get a 'better' husband. One respondent said:
"Parents think that medicine is rather safe for young women you have to interact with patients, the doctor-patient relationship and you do not have to face the outer world. I think ....And.. young men, I think can have many other options. I had two choices as to what I could do ..I was offered a choice between CA (chartered accountant) and medicine.. you were never exposed, the fields are available in society if you do not know about them then how can you choose them. So you go for limited fields with which you are familiar." (Respondent 12)(Female)

## Possible impact on teaching-learning activities

Classrooms: With more young women in the classroom, classrooms may be more silent and respectful. Girl students are more obedient and may respect teachers more. The FGD participants felt however, the young women may be
less interactive and their level of comfort for interacting with young men may be lower. Young men may behave more cautiously in the presence of young women. Many felt the impact on the classroom will be positive while a few felt the minds of young men would be diverted. A few male teachers may favour female students. Teachers may teach sensitive subjects like the reproductive system in a different manner. Some felt with more women, students may segregate themselves according to gender and may interact less with the opposite gender.
"Medicine was a profession dominated by male persons in the past ... with increasing number of female students and everything it is going to be difficult for the old professors to handle female students. In fact, the whole dynamics of the medical profession is changing so there would obviously be differences in how they teach and .. In the past according to my experience teachers could be as rude to students as possible. A type of ragging; seniors could be as rude to juniors as possible but with more females there would be changes in all these (behaviours)." (Respondent 57). (Male)

Practical and small groups: Respondents felt in human physiology classes usually young men volunteer to be examined and with the decreasing number of young men volunteers would be difficult to find. Peer physical examination (PPE) is at present being used in physiology practical. Working in a mixed group can teach students how to interact with the opposite gender and would be useful in future. During small group work young women concentrate on writing ideas and points on flip charts. They do not often take leadership roles. Also certain respondents who had studied in young men or young women only schools find it difficult to interact with the opposite gender. A respondent felt young men and women contributed equally to the group work in small groups but women were reluctant to present before the large group or do role plays.

Clinical sessions: In clinical sessions having young women was felt to be helpful especially in obstetrics and gynaecology where female patients felt more comfortable with female students and were willing to give a history and be examined.

Relationship with teachers: Many students felt the gender of the teacher does not affect their relationship with students while some felt few young male teachers favoured female students. A respondent felt this could be because young women are more disciplined, more attached to teachers and softly spoken. Being a woman may provide certain advantages during exams where female students are not often checked for chits of paper and invigilators are
more lenient towards them. During viva-voce some teachers may favour female candidates.

Impact on college infrastructure and facilities: Respondents felt there would not be a major impact on college infrastructure and facilities. With more female students some felt there would be less demand for playgrounds and outdoor sports facilities while others disagreed. In Nepal many medical schools in cities do not have adequate space for outdoor recreation. Security for young female students was a major issue putting greater responsibility on the college. There would be more restrictions and a greater demand for hostels. Women would demand better and more quality accommodation while others believed women would be less demanding. Also a few stated that there has to be an increased number of bathrooms and mirrors. With young women the college would have to invest more on indoor sports facilities.

Effects on the doctor-patient relationship: Respondents agreed that the increasing number of women would cause changes in the doctor-patient relationship. Women are regarded as more empathetic than men and present themselves better to patients. They have better explaining ability and convincing capacity according to respondents. Patients may give a more complete history and doctorpatient communication will improve. Patients may be more willing to condone mistakes of female doctors due to various reasons. Respondent felt patients may have a greater 'role' in the relationship with a women doctor as they are more patient centred. There could be negative aspects also. Some felt some young men may unnecessarily visit the hospital to interact with beautiful woman doctors.

In certain cases women doctors may be excessively attached to their patients and the death of a patient may have a bad emotional impact. Also all agreed women may find it difficult to break bad news as they may break down and be emotionally upset while delivering the same. Another point which came up was as follows:
"But sometimes like if you just look at the society .. Nepalese society views male gender as much superior to a female.. so there might be a perception that a male doctor is much more competent than a female. It might happen, especially in rural areas." (Respondent 58). (Female respondent)

Effects on the health system: Respondents agreed that female doctors could have a major impact on rural health. In rural Nepal women are reluctant to approach male health workers for 'female' problems. With female doctors this would not be a problem with female patients. Female doctors may find it easier to interact with women especially
on matters of reproductive health, birth control and immunisation and nutrition for children and mothers. Female paramedical health workers have played an important part in improving healthcare in rural areas of the country. Respondents stated that a woman is more likely to bring about changes in her family's level of education and lifestyle.

However, respondents also agreed that women may be less likely to serve in rural areas due to various reasons including family commitments. Marriage and husband working in a different place, problems of security in rural areas, difficulty in adjusting to the rural culture, and problems of rural life were cited. In Nepal some rural health facilities may be difficult to access and may involve walking through difficult terrain. Women are likely to choose specialties which can give them more time with their families and have regular and shorter working hours. Popular specialties in Nepal include obstetrics and gynaecology, paediatrics, pathology, ophthalmology and dermatology. There may be problems of acceptance of female doctors especially in rural areas and often they may be regarded as a nurse. In urban areas they may be accepted if they are competent.
"It is easier for the young women to be.. not bullied but maybe the local people can easily dominate the girl.. It is more likely. Definitely if a person goes to a rural setting can happen. I feel it would be better if he or she has a colleague at that time also may be of the opposite gender.. It is easier they get exposed as well and feel secure." (Respondent 64) (Female respondent)
"Whoever is an educated person goes there and they are able to give the knowledge to the people .. the people are understanding what they are trying to give obviously they will be accepted in the society. It does not matter whether it is a boy or a girl they are in a need .. and if someone is willing to help them they will obviously take help from them." (Respondent 44) (Male respondent)

Personal issues of female doctors: Most respondents agreed women may find it more difficult to balance a career and a family compared to men. They have to care for their children, husband and in-laws. Some felt that with an increase in the number of nuclear families in modern Nepalese society the situation is easing for woman. Also in Nepal by the time women finish their undergraduate medical course (MBBS) they are around 24 years old and parents will be thinking of their marriage. They do their post-graduation after marriage and find it difficult to study and manage a family. Most female respondents felt men should be more willing to take a greater share of family
responsibilities. Many women felt that a doctor husband would be better as he can better understand the work pressures on a doctor. However, the doctor couple may find it difficult to devote sufficient time to their children. There may also be an 'ego problem', which respondents felt may lead to a higher frequency of divorce.

All respondents agreed women doctors are less likely to emigrate to foreign countries on their own. Parents are more concerned about the safety and security of their daughters and women may find staying within the country more comfortable. However, they may emigrate after marriage with their husbands.

Pharmaceutical promotion and relationship with nurses: Regarding pharmaceutical promotion opinions were divided. Some felt that female doctors would be more difficult to convince and less corrupt than males. They also felt that while taking decisions women think more of others and of the consequences of their action. Others felt women may be easier to convince and companies will use more male medical representatives and the nature of the gifts may change to more 'feminine' ones like jewellery and diamonds. Regarding the relationships with female nurses (most nurses in Nepal are female) most felt this will deteriorate due to ego clashes and jealousy. A few felt it may improve and the relationship may depend on the nature and maturity of both parties.

Impact on other women and the nation: Women doctors in a patriarchal society can be a source of inspiration to other women motivating them to excel. Women and children will get better health care and will be better educated by women doctors about nutrition and health. Once women doctors are better represented at the higher levels of government, women and health issues can get more attention. Over $50 \%$ of Nepal's population is female and more women doctors may lead to gender equality and more say for women in the country's affairs.
"Only increasing number of female doctors in the country is not enough. The government should also look into working conditions of doctors and provide them with full security.. there should be good plan for doctors in health facilities all over the country. Good health all over and the country will develop." (Respondent 47) (Male respondent)
"I think overall increasing number of female doctors is good for the females themselves, (and for) the family and the country. Changes are required in family and in society.. changes required in perspective and actions." (Respondent 59) (Female respondent)

## Discussion

Participants agreed that the number of female medical students is increasing. Increasing education of parents and of girl children and increasing economic prosperity could be reasons. Female students are likely to be more disciplined in the classroom but may be less interactive. Women are more empathetic and better at communicating with patients. Female doctors will be more easily accepted by women and children patients and can make a positive contribution to rural health. Due to various reasons, however, women are less likely to serve in rural areas. They will have more problems balancing career and family compared to males.

In Nepal, the data from different medical schools show that a large proportion of students are from the Kathmandu valley. Urban, educated parents in Nepal are concerned about their daughters and would like to admit them in schools near their residence. At present there are six medical schools in or near the valley. In Nepal, tremendous strides have been made in education and the literacy rate among female youth was $75 \%$ in 2004-2008. ${ }^{16}$ The economic parameters are also improving and gross domestic product (GDP) per capita was US\$440 in 2009. There has been a significant improvement in these parameters in recent years. A large number of workers migrate from Nepal to the Gulf countries, Malaysia, Korea and Western nations, and their financial remittances may constitute up to $13 \%$ of the GDP. ${ }^{17}$ This has brought prosperity to certain regions and individuals and this in turn has encouraged parents to more willingly spend on the education of their children. This data may corroborate the views expressed by student participants about possible reasons for the increasing number of female students.

PPE is the process by which students examine each other as part of their learning process in anatomy and clinical skills. ${ }^{18}$ In Nepalese medical schools, PPE is not used in anatomy and is mainly used in human physiology. Having a mixed gender group can influence PPE. Women are usually not chosen for PPE due to various reasons. A recent study mentions students should be allowed to choose their PPE environment including working with friends or unknown classmates and PPE was regarded as valuable in terms of clinical skills and future clinical practice. ${ }^{19}$ In Nepal class sizes are small compared to certain other countries and all students have their theory classes together, thus being familiar with all their classmates. Medical teachers participate not only in teaching diagnostic or procedural skills but also 'educate' students in the broad sense of the term. ${ }^{20}$ The relationships that medical educators (doctors)
form with their students are the key sources of learning experience that students draw upon when they find themselves in the role of teacher with their patients. A recent article published in the British Medical Journal states that role models may not be a dependable way to impart professional values, attitudes and behaviours. ${ }^{21}$ Some senior doctors may show poor attitudes and unprofessional behaviour causing confusion, distress and anger among students. The authors conclude that professional behaviour and ethics should be explicitly taught to students.

A meta-analysis suggests that female physicians are more likely than male counterparts to engage patients as active partners in their care. ${ }^{22}$ Women are more likely to adopt a democratic style of relationship. Patients may be more comfortable with physicians of the same gender and outcomes may be better. ${ }^{23}$ In developed nations male patients may find it difficult to obtain care from a male doctor due to their decreasing number.

A study had shown women work fewer hours per week and may take time off for child rearing. ${ }^{24}$ Another study showed women prefer to practice in urban settings. ${ }^{25}$ Female physicians may experience professional isolation, lack of privacy and lack of work opportunities for spouses in rural areas. ${ }^{26}$ These problems may be magnified in a developing country like Nepal. Participants mentioned a few male patients may visit female doctors due to 'sexual' reasons. In Canada a survey among women family physicians found over $75 \%$ of respondents reported some sexual harassment by a patient at some point in their careers. ${ }^{27}$

Balancing a career and a family remains a problem for female physicians all over the world. A study conducted among Australian medical students found most preferred a balance of work, family and lifestyle in making career decisions. ${ }^{28}$ Most rated family commitments as high. Women and even male students were interested in working part-time and would negotiate support from their partners and parents to care for their children.

In Nepal the traditional nature of society and greater unevenness of work distribution among genders may make things more difficult for female doctors though changes are occurring. The decrease in the number of joint families may have both a positive and negative impact. On the one hand the trend towards nuclear families may provide more freedom for women; the negative side is the experience and support of senior and experienced family members will be lacking.

We have not been able to obtain studies from the literature about the impact of increasing number of female doctors on promotion tactics of pharmaceutical companies.

The traditional relationship between a doctor and a nurse has been of a female nurse obeying a male doctor. With the increasing numbers of female doctors the relationship may change. A Canadian study found female nurses were more willing to serve and defer to male physicians. ${ }^{29}$ Female nurses feel more comfortable approaching and communicating with female doctors but were also more hostile towards female doctors' use of authority. The authors state that this paradoxical behaviour may confuse female doctors. Female doctors are regarded as more caring and compassionate than their male counterparts and this may create conflict with nurses who define caring as their function and feel this is being threatened by female physicians. ${ }^{30}$ Some female nurses described female doctors as 'domineering', 'demanding' and 'bitchy'. Female physicians resented having to make extra efforts to be nice and developing strategies to cultivate egalitarianism and friendship.

In general, many findings from the present study are similar to those noted in the literature. The nature of Nepalese society and unequal power sharing may make the degree of difficulty for Nepalese women doctors higher than in developed nations. In Nepal there are two hierarchies: one of caste and one of gender. ${ }^{31}$ More privileged castes like Brahmins and Chhetris have a 'superior' position in society. People of Tibetan origin with a non-caste based (egalitarian) social structure have more gender equality in their society compared to people of Indo-Aryan origin with a caste-based social structure. In KISTMC and most other schools the majority of students are from the higher castes or from the Newars (original inhabitants of the Kathmandu valley who have a complex social structure with both caste and ethnic groups).

Limitations: Our study had many limitations, and is more suggestive than definitive. The sample of respondents was only those who were willing to participate and this may have introduced bias. The sample may not be completely representative of the student population. Fewer number of third year students participated. Opinions were collected only using FGDs and were not triangulated by other methods. The study was conducted only among medical students in a single medical school. The facilitator was a faculty member and this may have created some inhibition among participants though they appear to have expressed their opinions freely, frankly and sometimes with passion. Our findings may not be representative of the entire
student population at the institution and there may be problems in generalising our findings to other settings.

Suggested topics for further research: Further studies in Nepal are required among students in the final years of study and during internship. Studies are also required among postgraduate students. KISTMC is a new medical school and we have only three batches of students at present. Regarding the impact of the increasing number of female students on college infrastructure and teachinglearning activities studies are required among faculty members and college administrators also. Female doctors working in different specialties and in rural areas should be interviewed to obtain more information on career preferences, reasons for choices, problems in balancing career and family and serving in rural areas. Studies in the community may provide information about their perception of female doctors. Rural communities should be studied to know their perception of female doctors. The perception about female doctors among other healthcare professionals (both men and women) will be of interest. Patient perceptions about female doctors can be studied among the urban, educated elite and among marginalised communities. This preliminary study raises many important questions which can serve as important areas of future, detailed study.

## Conclusion

The study shows that the FGD participants perceived an increasing number of female medical students may be due to changes in Nepalese society like increasing education and socioeconomic development. The students and the respondents were predominantly from the urban, educated sector of Nepalese society. They felt there may be implications for teaching-learning activities and for medical schools and the doctor-patient relationship may become more patient-centred. Participants were of the opinion women may be less likely to serve in rural areas and would like to work part-time and in a flexible manner. The information in the previous sentence has to be corroborated by information from currently serving female doctors. In Nepal, resources are limited and support systems especially in rural areas are scanty. This may have important implications for healthcare delivery in the country.

This was a preliminary investigation of a topic which has not been previously studied in the country. Similar studies may be required in other medical schools and among women medical professionals. This is an important issue for health and healthcare delivery in Nepal and other countries.

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