Why women go to medical college but fail to practise medicine: perspectives from the Islamic Republic of Pakistan

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CONTEXT Female medical students outnumber men in countries such as Saudi Arabia, India and Pakistan, yet many fail to practise medicine following graduation. In Pakistan, 70% of medical students are women, yet it is estimated that half of them will not pursue medicine following graduation. This is considered a major reason for physician shortages in the country.

METHODS We conducted a qualitative study drawing upon the 'role strain' theory to explore the views of final-year medical students from four medical colleges in Karachi, Pakistan, on female graduates not entering the medical field. Data were obtained through 20 individual in-depth interviews and two focus group discussions. Themes were developed inductively from the data using the constant comparison method.

RESULTS Pakistani parents actively channel daughters into medical education, considering medicine to be the most 'respectable' field. However, in a patrilocal society with norms of early, arranged marriages for daughters, there is a significant influence of in-laws and a husband on a woman's professional future. Parents perceive the medical degree as a 'safety net' should something go wrong with the marriage, rather than a step toward a medical career. Female respondents experience significant role conflict between their socially rooted gender roles as homemakers and mothers and their careers in medicine. Postgraduate training systems that are unfriendly to women provide further deterrents for women wishing to work. Contrary to popular belief, women not practising medicine is not the sole contributor to physician shortages. A significant factor appears to be male graduates migrating abroad for better training and financial prospects.

CONCLUSIONS Acceptance of traditional cultural values, including entrenched gender roles in society, deters women from practising medicine. To enable greater participation of women in the medical field, steps are required that will allow women to better manage family and work conflicts.

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INTRODUCTION

Medical education is being increasingly dominated by women, with more women applying and getting accepted to medical colleges than men.[1] This trend is also present in the UK, USA and Australia. In some medical colleges in the UK, women constituted up to 65% of the medical student body in 2002–2003.[2] Non-Western countries increasingly mirror this trend, with the percentage of female students as high as 70% in India and 73% in Saudi Arabia in the past few years.[3–5] However, this may not necessarily translate into women's increased participation in the workforce as physicians after graduation. For instance, in India, despite a large number of female graduates, only 17% of practising physicians are women.[3] Although there is documentation of the percentage of women at the undergraduate level, insufficient information is available with respect to what occurs once they graduate. Studies indicate that women's participation in medicine is underpinned by broader sociocultural factors, with cultural views about gender roles affecting women's career progression in medicine.[6]

Globally, retention and advancement of female physicians in the workforce is considered a major issue. Women tend to be underrepresented in senior faculty and leadership positions in medicine for numerous reasons. These include being perceived as the 'other' in a male-dominated culture, gender bias and exclusion, and facing difficulties in managing personal life and work life.[7] During postgraduate training, female physicians with families in countries including Canada and the USA have reported little institutional support, leaving women conflicted with regards to their roles as mothers.[8] In order to strive for 'family friendly' careers, women predominantly tend to choose subspecialties such as family medicine, which allows for flexible working hours.[9] These issues also hold true for non-Western-oriented countries. In Nepal, Shankar et al.[10] found that although more women are enrolling in medical colleges, at the same time domestic responsibilities, particularly after early marriages, restrict them from continuing in the medical field, including undertaking specialty training.

In Pakistan, women now constitute over 70% of the admissions to both public and private medical colleges, yet it is estimated that half of them neither practice nor undertake specialty training following graduation.[11] This is increasingly being perceived as a waste of valuable national resources by policymakers because public medical college education is subsidised by the government to Rs. 100 000 (approximately US$ 1000) per year, compared with five to seven times this amount charged by private medical colleges.[3] It is also considered to be a major reason for the chronic shortages of physicians in a country that graduates 14 000 physicians every year from 61 private and 40 public (government) medical colleges registered by the Pakistan Medical and Dental Council (PMDC), the governing body for undergraduate medical education.[12] In a country of 200 million residents, with a ratio of 0.83 physicians per 1000 population, this has far-reaching implications for the public.[13] In 2014, the PMDC recommended restricting admissions of women to 50% of the student body to deal with the problem of physician shortage, but this is currently on hold following a challenge in the Punjab High Court.[14]

The fact that women enter medicine in large numbers but do not go on to practising seems paradoxical but there has been no study conducted to systematically understand the issue. The popularity of medicine in Pakistan among young women has been described in the lay press as a means of obtaining better marriage proposals.[15,16] One publication 11 years ago mentions physician shortages in Pakistan as being 'gender related' without further elaboration, highlighting the gap in the literature with respect to sociocultural dimensions.[17]

Existing literature deals predominantly with challenges faced by female physicians who are already practising or working in academic positions.[18] By contrast, there is little information available on the trajectories of female medical students who graduate successfully but fail to enter the medical workforce at all. Through in-depth interviews and focus group discussions with final-year medical students, we attempted to explore their views with respect to (i) reasons for an increasing number of women entering medical colleges and (ii) factors that lead women to not pursue medicine following graduation from medical college. Although our study was undertaken to explore and address this issue within the context of Pakistan and this region, it also has international relevance in light of increasing movement of people across the globe. In Canada, for example, 22% of medical graduates obtained their degrees in the

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Indian subcontinent.[19] Immigrants tend to carry their values with them to their host countries, and understanding social values that are predominant in diasporas is important for those involved in medical education and training around the world.

METHODS

Study design and theoretical framework

We undertook a cross-sectional, exploratory qualitative study with final-year medical students. Keeping in perspective the literature on female physician attrition, we drew on the theory of 'role strain'.[20] We considered this theoretical lens most suitable to explore the reasons for female graduates not entering the medical field. Adopting a functionalist view of society, this theory emphasises that 'societal structures are made up of roles' and individuals have a variety of roles to fulfil that may place immense demands on them. Conflicts generated by multiple roles can result in 'role strain' because of the stress of different obligations associated with given roles. These are further accentuated if finite resources are available at one's disposal and therefore the individual 'must move through a continuous sequence of role decisions and bargains'. Resolving the conflict may involve adopting the role that relies on maintaining 'institutional integration' and conforming to the more socially accepted role. Different means can be utilised to minimise the role strain (for instance, by delegating some duties of a role to others), but societal values generally determine which role can be transferred to others.

In combining various roles, individuals may face barriers that may be expressed 'in part by the punishments which the individual may have to face' and may 'make for considerable role strain, so that few would care to enter them'. The theory, however, also recognises that there will be some who will choose to not conform to socially accepted norms for individual or situational reasons. The role strain theoretical framework has also been used in the analysis of work and family conflicts in other professions, particularly with reference to women.[21,22]

Study setting

We conducted the study in two public and two private medical colleges in Karachi, the most populous city in Pakistan with 15 private and public medical colleges. The two public colleges chosen are among the oldest, most prestigious and sought after in the country, and the private colleges were selected on the basis of their credible reputation that draws local students as well as children of Pakistanis settled in the Middle East.

Prior to the study, ethical approvals were obtained from the Ethical Review Committees of the four medical colleges enrolled in the study and also from the institution in which we are based.

Participant recruitment and selection

Final-year female and male students were chosen for the study as they are at a stage when many are planning their futures following graduation. This was done through convenience sampling by identifying a contract person in each medical college to announce the study and identify students who wished to volunteer to participate. Those who volunteered were assured by the contact persons that their names and those of their institutions would be kept confidential and not identified in any publication. This was reinforced by us prior to all interviews and discussions we undertook. We chose to include male participants in order to make the sample more representative of class gender ratios, and because social roles adopted by men and women are interconnected and model and influence each other in societies.

A total of 24 female students and nine male students participated in the study. The male to female ratio of study participants (1 : 2.6) closely mirrored the student body ratio (1 : 2.3) in medical colleges in the country. We did not use any predefined demographic criteria for our study participants. All study participants who formed part of the study were Muslims and living in Karachi at the time of the study. All, except for one young man, were being supported financially by their families.

Data collection

Twenty semi-structured interviews (five from each college) were undertaken with seven men and 13 women, with each interview lasting from 45 to 60 minutes. Two focus group discussions, one in a public and one in a private medical college, were conducted, each lasting approximately 90 minutes. The focus group in the public medical college consisted of six female participants and that in the private medical college involved five female and two

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male participants. Interviews and focus group discussions were conducted using a semi-structured guideline consisting of open-ended questions informed by the literature search and our theoretical framework. These were first piloted with four final-year medical students to assess the adequacy and coherence of questions and modified appropriately.

We collected data between June 2015 and February 2016. Prior to each interview and discussion, verbal consent was obtained from participants and audio-recorded. Neither of us is associated with the colleges used as research sites. The first author (FM) is a senior female surgeon who has practised and taught medical students for several years in Pakistan and abroad, and the second author (SS), also female, has a social sciences background with an interest in issues related to gender. We believe that because one of us shared a medical background with participants, this helped them to share their views with greater ease. However, the fact that we are both working women may have led participants to tailor their responses, considering that the issue involved possibly non-practising female students. We attempted to minimise this by assuring the participants intermittently that their views held value for the outcomes of the study.

We maintained notes on reflexivity, particularly in terms of possible preconceived ideas about the topic, and when necessary corrected each other in case of bias. We also discussed relevant points after each interview and focus group discussion. Interviews and discussions were conducted in a mix of English and Urdu (the authors are fluent in both languages), which is generally how daily conversations take place in the country among professionals. These were recorded on a Dictaphone to aid better record keeping.

Data analysis

The data were transcribed verbatim and Urdu phrases translated into English by one of the authors and verified by the other, thus ensuring accuracy and rigour. All transcripts were anonymised and assigned unique identification numbers. Themes were developed inductively from the data through a constant comparison method in a series of steps, which included:[23] (i) reading each transcript individually and assigning open codes to data; (ii) comparing the transcripts, developing patterns and identifying consistency in the data through the process of axial coding; and (iii) 'emerging' of themes[24] and grouping data under themes according to gender and institution. Both authors agreed on the thematic framework and interpreted the results in light of the theoretical framework.

RESULTS

To allow for clarity and synthesis, we present our findings by research questions, and specific themes that emerged are grouped under each. Although not part of our main research questions, we also chose to include factors accounting for physician shortages in Pakistan because this was raised repeatedly by both male and female respondents.

We did not find significant differences in opinions based on enrolment in public versus private medical college. Responses from both male and female participants were also quite similar to each other.

Reasons for increasing numbers of women entering medical college

Parental influence

In Pakistan, unmarried adult children generally live with their families, who assume responsibility for their higher education, and a significant parental influence on daughters and sons to pursue medical education is not uncommon.[25] Both male and female participants spoke of the '*izzat* (honor)', prestige and social status equated with the medical profession. Several came from 'doctor families' and were expected to follow in the footsteps of their elders.

Parents expressed open disapproval if children expressed an interest in other professions. A male student told us, 'I had no love for it . . . I did not want to go into medicine . . . my father and mother sat me down one day and said that go into medicine . . . Look at your Taya [paternal uncle] he is so successful'.

Parental pressure was accentuated in the case of daughters. A woman narrated that when young, 'guests would come and ask me what I would become when I grew up and I used to say I will become a heroine [in TV shows]'. When her parents heard this, 'I got a big scolding . . . they said in which direction are you dragging our name . . . when anyone asks you what you will be when you grow up you must say I will be a doctor. And from

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that time I always remembered'. According to one female participant her father 'gave me only two options, either it was engineering or medicine ... but about engineering he said it's not easy for girls. My father, he is a practical man and I think he made the right decision for me'. Another said, 'I wanted to go into nuclear physics ... but my dad did not let me. I couldn't go against him'. As far as nuclear physics was concerned, 'That dream is long gone ... I am always adapting to my surroundings. I am very realistic'.

Women explained, 'The preference has always been for doctors and teachers [for daughters]', but 'doctors have a higher level'. Parents also did 'not wish their girls to do office jobs' as this meant working in close proximity with men, and neither do they 'want girls to be in media ... to be models. People will think she doesn't have a good character'. Medicine is a field in which 'women can get more respect compared to other professions', 'a noble field in which people idealise you', and hospitals are perceived to provide women with a 'safer' work environment.

Women considered it important that fathers were 'behind you', supported you for higher education. According to one, 'My mom [a housewife] ... she is simply no, after FSc [Class 12] [a girl should] get married. Throughout it has been my father who has been ... pushing me and saying that you have to do this [pursue medicine]'. One male student noted wryly that, 'Even the man who will not allow his wife to work will want his daughter to become a doctor'. One woman, however, said that, 'My mother was a housewife but she said... get an education first and then you can get married. But you have to work, never sit at home ... do not be just a wife who cooks aloo gosht [potatoes and meat]'.

Safety net for daughters

Parents, although encouraging both sons and daughters to pursue medical education, appeared to have different expectations of them following graduation from college. A female student told us, 'I tell [my parents] that I want to support them, but my Abu [father] says that no, beti [daughter] you will be married. We do not need your money'. However, if her brother told the parents that he would not support them financially following graduation 'they won't be OK with it. They will say to him that why do you think we have educated you so much'.

Pakistan is a patrilocal society and women typically move to their husband's house after marriage and live with their husband's parents. Our interviews suggested that parents saw a medical degree for daughters primarily as a safety net should something go wrong with their marriage and not as a means to making a living as expected from sons. Education was considered *lazim* (necessary) because 'it often happens that girls are having a difficult time with their husbands ... his and the in-laws rawayya (attitude, behaviour) is not good but she cannot leave them as what will she do. But if one is educated then you can earn a living, take your own decisions'. A female student explained, 'Every father knows that if my beti [daughter] won't be settled [in her married life] then she cannot earn money [without a degree] so how will she take care of herself'. According to another, 'My parents' viewpoint is that my beti should be stable enough so that if there are any problems created from the side of the in-laws, she is educated enough to take her life forward'. In such cases the degree 'can be a major help in crisis. But apart from that, [earning money] is not an issue for girls'. According to one woman, 'It happens that if circumstances become bad then the wife should have a solid degree in her hand'.

Factors encouraging women to not pursue medicine following graduation

Social importance of marriage

Our study highlighted cultural and religious norms in which parents perceive it a duty to ensure that daughters are 'settled' (married) during their lifetime. This results in early marriages for women in Pakistan. A woman explained, 'The mean age for marriage for girls is 23 to 24 and for boys 28 to 29 ... In our culture it is believed that if the girl's age gets higher she will not get married'. Another added, '... when we come in fifth year or fourth year [of medical college] there is talk in the family about our marriage ... we get proposals and that's when we realise we need to think about this'. By contrast, a male participant said, '... my father said to me unless you clear Part I [exam] of FCPS [Fellow, College of Physicians and Surgeons] don't even think about marriage! ... If you get married, you will have difficulty concentrating upon your studies. Then how will you become successful?'.

Lack of knowledge about the opinions of future husbands and in-laws regarding working women led to significant uncertainties. 'Girls end up getting

confused. It's a new phase of life [after marriage]'. One interviewee said, 'Girls are unable to decide, their future is uncertain ... I want to go abroad. But I don't know where I will go [following marriage]. I don't know which licensing exam [for postgraduate training] to apply for... I think it depends on the husband and the family ... Things might change after marriage ...'. Another stated, 'I have plans but let's see ... I can only ask my husband and in-laws ... please give me permission [to work] and please support me'. A student spoke about a friend who, following marriage, 'misses clinics and does not even attend normal classes ... her husband is the religious type ... She makes excuses [for him] ...'.

Women joked about mothers-in-law preferring 'rawaitee bahus [traditional daughters-in-law]' who make perfect 'gol rotees (round chappatis)'. A student, engaged to be married soon, said, 'My mother-in-law expects a lot from me, she says to me ... when will you come and decrease my burden?'. Others mentioned, 'If I get in-laws and they tell me not to work, I cannot do much about it', and that in-laws do not appreciate when daughters-in-law are working. 'They say, she wasn't home in the morning; she was not home in the evening [because of night duties]. She is never home!'.

Another said, 'I am not going to put my family life at stake [by working against the wishes of my in laws]', and that working women 'are not able to take care of the house and the children'. For many women, inability to pursue careers appeared to relate to uncertainties regarding husbands and in-laws and highlighted their conflicts. According to one female participant, 'If you work... then you don't have time for your children...give a hot roti [bread] to your husband every time he comes back from his job ... Pakistani men ...want a wife who serves and not a life partner'. Setting aside careers in such a situation was perceived as a 'sacrifice' that women make because 'they are supposed to rather than because they want to'. They also often have to leave careers after marriage because of 'majboori' (compulsion); they do 'not want to leave, they are forced to leave'. Failure to perform their duties as responsible wives and daughter-in-laws may also, at times, lead to severe consequences for women, such as divorce. According to one female participant, 'What if the marriage falls apart? The society will ask: what happened? People may say that it was because she [the wife] was working. She will be blamed'.

Although most female participants appeared to accept the centrality of marriage, there were a few who appeared dismissive of these cultural norms. A female participant mockingly stated, 'When a girl child is born, the first thought of the mother is that I want her to get married to a very nice and rich family ... and this is what [the girl] dreams of ... If you have seen your mother and your cousin and girls of your age do the same thing, then they would do that as well...'. In her opinion, it was therefore hardly surprising that many women did not choose to practise medicine.

Acceptance of traditional gender roles

The majority of female (and male) participants considered a woman's central responsibility to be that of a mother and 'ghar kaa kaam sambhalna (handling household duties)' and the man's primary duty was to work to 'support himself, his family, his wife and children'. Reasons provided in support included 'this is our culture', 'these are our values', 'the realities of our society and religion' and 'God has made us this way. Our physique is different; our emotions are different from males. We can't compare men and women and say that because a man does it, a woman should do it'.

Women expressed pride in their 'natural' and religiously emphasised role as a mother, one that provides them with societal respect and superiority over men. Only mothers are capable of 'main tarbiyyat [proper/moral rearing]' of children. 'The way a woman brings up her child no one else can', and otherwise 'our religion would have said that it is the father's responsibility that he stay at home and raise the children'. Nevertheless, among those who emphasised the primacy of motherhood, some spoke about their internal conflicts over their expected role in society as mothers and their desire to work as physicians. One woman commented, 'Should I listen to my dil [heart] or should I listen to them [society]?'.

Our study revealed that men who default on their responsibility as breadwinners are equally open to social disapproval and stigmatisation. 'Log kiya kahein gay [what will people say?]'. The husband of a working woman is referred to pejoratively as 'joru kaa ghulam [the wife's slave]'. According to a Pathan woman her 'conservative community' scorned men 'eating from the kamai (earnings) of a woman ... [they say] this is against our ghairat [sense of honor]'. In this scenario, according to one woman, 'If my husband is making 5 lakhs, why

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should I earn? I would be putting him through mental torture especially if my in-laws are not fine [with my working]'. Female earnings were referred by some as 'optional', 'pocket money for shopping'. One woman said that she had heard a Muslim scholar describe financial contributions by the woman as 'sadqa [charity]' and therefore not obligatory.

Our study also revealed a handful of women who expressed determination to continue in the medical field despite all odds and cultural expectations, 'I have studied so much and I didn't study to just earn a living. I studied because I want to do certain things in my life ... I want to work for myself'. Another told us she would practise because, as the oldest daughter of her family, 'I have to ensure that my younger brothers and sisters reach universities and get ahead in life', and that her elder brother 'is more pampered and does not feel responsible'. The resolve of a quiet woman from a 'very male centered, conservative region' of the country to pursue medicine was illustrated by her compromising with her parents' wishes. A previous incident in which a woman from her extended family had married outside the family following graduation led 'the elders' to rule that women would no longer be educated as this had led to 'dishonoring the family name'. When her parents asked her to get engaged to her uneducated cousin she agreed. This was because if she refused, 'after me, no other girl [in my family] would be allowed [to go to medical college]'.

Additional factors contributing to physician shortages

Although this was not among our research questions, structural issues surrounding postgraduate training systems that contribute significantly to physician shortages in Pakistan recurred repeatedly, highlighted by both male and female participants. Because overall systematic structures have an impact upon the difficulties women experience in choosing to pursue their careers and hold implications for future steps, these findings have been included.

Postgraduate training systems that are not friendly to women

For women, long working hours and night shifts connected to postgraduate training appeared to also act as deterrents in the light of norms of responsibilities following marriage. According to one female participant, '[Medicine] is not a 9 to 5 job. And you have to be there all day especially in cases of emergencies'. Once women have children, this becomes even more difficult. As one female participant noted, 'No woman would want to leave a one month old baby at home. If there were day care centers, then they could take one to one and a half hour off from their duties to spend time with the kid and still be able to work. This would allow women to balance their personal and professional lives'. Many working women 'get torn because they feel guilty that they couldn't go to their kid's friend's birthday party because they were on call'. This occurs because 'priorities change after marriage and children'.

A male participant said that his physician mother left the profession because 'she wanted to give more time to us [her children] since my father [a physician] was never home and worked late'. Female participants pointed out that women who did manage to work ended up choosing specialties requiring shorter working hours because 'friendly timings, such as working from 9 am to 4 pm, the workload is less and they can carry out their household chores'.

Disorganised, poorly paid training programmes

National postgraduate training programmes were perceived by both women and men to be disorganised, poorly paid, corrupt and insufficient in number to meet the needs of medical graduates. As opposed to women, the long duration of postgraduate training combined with low salaries appeared to be a greater problem for men who have to support families, 'You can earn only Rs. 30 000 [approximately $300 per month] during house job and Rs. 40 000 [approx $400] after FCPS. Then how can you support your family?'.

In the opinion of both male and female participants, the long years required for training with meagre salaries also served as factors in the decreasing number of men applying to medical colleges, because they preferred careers that allowed early financial independence. According to a male participant, 'Men have to support their families and they require money for that. And if you go towards engineering [or other fields], then you can get a better salary package along with benefits such as cars in a shorter span of time'.

Corruption within local postgraduate training programmes was also considered problematic. In

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the opinion of another male student, 'People with good grades are not getting ahead, not getting places in training hospitals . . . If I am working hard and if I have expertise, [it doesn't make a difference] because someone he knows is sitting there [in a powerful position]'.

Perceived superiority of overseas training programmes

Men planning postgraduate training consider programmes abroad to be far superior, better paid and more structured than those available in Pakistan. As compared with women, most male participants of our study were already preparing for international licensing exams.

We heard, 'When I know I am capable of doing so much more, why should I settle for a system over here, when I could settle for a superior system over there?', '80 percent of my class is giving USMLE', and 'From my class, 70 percent of the [male] students want to go abroad. Very few want to stay back'. The countries of choice, to name a few, included the USA, UK and Australia, and some male students mentioned interest in settling in the Middle East eventually to make a better living. By contrast, 'females tend to not apply because of the uncertainty life poses for them'.

DISCUSSION

Although existing literature, particularly from the West, has addressed factors that impede the retention and progression of women already working in medicine, the present study focuses on reasons for women choosing to not enter the medical workforce at all. Despite a global increase in the number of women entering medical colleges, our study reveals that entrenched social patterns and gender roles continue to influence women's decisions to initiate a career in medicine, a trend not limited to Pakistan. The 'role strain' framework has widely been employed in other professions to understand the work and family conflicts after marriage and this is applicable in the case of women in Pakistan who find themselves unable to join the physician workforce following graduation.

Although we found strong parental support (especially from fathers) for educating daughters, it was clear that marriage and maintaining harmony with husbands and in-laws supersedes a career. This is particularly true in patrilocal societies, such as Pakistan, where women move into the husband's house and live in joint family systems, as reported from other studies conducted in the country. For example, a study involving parents and teachers of children enrolled in rural Punjab schools reveals increasing acceptance of educating daughters as a 'form of protection', but with a belief that women should not work unless permitted by their in-laws.[26] Research from other developing countries, although emphasising female education as a means of improving well-being, also recognises that education *per se* does not necessarily translate into more women entering the labour force.[27,28] In fact, the widely accepted social role of a woman as a 'good daughter-in-law' and 'traditional wife' clashes with the particularly demanding role of a physician. As our theoretical framework suggests, this leads women to forgo their careers.

Our study demonstrates the acceptance and support of traditional gender roles for female and male medical students alike: men as breadwinners and women as homemakers and mothers. The norms of early marriages for women in Pakistan do not allow them to plan their professional futures. The expected duties of a wife combined with the responsibilities of a career in medicine, as our study suggests, lead many women to experience role conflicts. As the role stress theoretical framework emphasises, most individuals conform to the dominant social roles expected of them. This is also evident in our study when women express a change in their priorities after becoming wives and mothers, both strongly approved roles in society. As highlighted by our female participants, non-conformity to gender roles can carry significant negative repercussions for women, including the stigma of divorce. However, although the conflict between family and career may be more pronounced for women in traditional Asian and Muslim countries, it is by no means limited to these regions.[29,30]

In a society where women are not expected to earn money and where their financial contributions to the family are termed 'optional' or a form of 'charity', their roles as mothers may provide them with empowerment and agency within otherwise patriarchal family dynamics. Many of our female participants perceived motherhood as their 'special domain', a role that accords them an elevated status over men. The power and advantages for women as mothers has also been reported from traditional non-Muslim societies.[31]

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Feminist literature has suggested that foregoing careers to be mothers is a form of 'false consciousness', an internalisation of gender roles that perpetuates dominant ideologies within patriarchal societies.[32,33] In this perspective, female participants choosing to forego medicine are not making a 'free', autonomous choice. However, human actions cannot be measured using a philosophical yardstick of atomistic autonomy that ignores the realities of where the individual is situated.[34] In cultures that are collectivistic, informed by traditional values that emphasise familial duties, and shaped by strong intergenerational ties and financial interdependencies, important decisions are often mediated within relational paradigms.[35,36]

Our study reveals this is also true to a great extent for men, who are expected to shoulder responsibilities as providers for the family and who face risks of societal disapproval and stigmatisation if they fail to do so. A male participant in our study remarked that whereas working women can be accepted in Pakistan, men do not have an option to not work.

Our theoretical framework also confirms that individuals can deal with conflicts in their roles in different ways. For example, some may choose to delegate some responsibilities of a role to others to decrease this conflict. Female participants in our study expressed a desire for women-friendly medical systems providing daycare centres and flexible work timings, allowing them to manage their home obligations while pursuing their careers, but these options were not available to them. Experience from other countries reveals that many women return to work when the children are older or if assistance is available in workplaces.[37–39]

Among our female participants, there were also a few who did plan to pursue medicine after graduation from medical college, thus not fully conforming to their socially approved roles. Although these women recognised the importance of marriage and motherhood, they emphasised their need to earn a living for themselves and their families, thus ascribing to themselves a role socially not considered theirs in society. Societies are not static and we believe that changing social and economic circumstances may make Pakistani society gradually more accepting and supportive of women who wish to join the formal workforce. However, at present, for women in Pakistan where delegation of their duties is not possible in the absence of familial or institutional support, not practising medicine remains the only choice for many.

Our study reveals that it is not only women who conform to gender roles but also men who accept traditional roles in society. In order to fulfil societal obligations as breadwinners for families, many are not choosing medicine as careers because of long training periods and poor salary structures. Of those who do pursue a medical degree, many choose to migrate to other countries for better-structured, well-paid and transparently run postgraduate training programmes. This is a trend that is also reported from other developing countries.[40–42]

With this background, to attribute physician shortages in Pakistan primarily to women acquiring medical degrees but failing to practise is simplistic. Restricting female admissions to medical colleges, as proposed by the PMDC, would be a myopic step bound to fail. As our study shows, problems that restrict women from entering medicine professionally are also shaped by broader structural issues, including poor postgraduate programmes in the country. In fact, higher-quality programmes that provide reasonable salaries may also help to overcome family resistance to women joining the workforce in specialties that allow them sufficient time to devote to their children, like their counterparts in the West.[43,44]

Our study has limitations. As it was conducted in an urbanised megacity with participants belonging largely to middle and upper-middle-class strata of society, our findings may not be generalisable to the rest of the country. Although we believe that the cultural and religious values we identify cut across social and economic strata in Pakistan, similar studies are required in medical colleges with students of less affluent backgrounds to determine if more female graduates plan to work for economic reasons. In addition, our study focused on participants talking about possibilities for their future and what will actually transpire cannot be predicted. Studies exploring the opinions and experiences of women following graduation will broaden and deepen the understanding of this important issue.

CONCLUSIONS

Our qualitative study, the first of its kind in Pakistan, was conducted to explore the reasons behind increasing numbers of women acquiring

medical degrees yet many failing to pursue postgraduate training or practise medicine following graduation. This phenomenon has also been reported by other South Asian and Muslim majority countries. In light of limited systematic research available to help understand this important issue, we believe our study has significant implications for countries with patrilocal family systems, similar traditional cultural and religious values that emphasise gender-specific roles, and poorly functioning training programmes.

Although societies evolve over time, bringing shifts in rigid role structures, in the short term, restructuring postgraduate training programmes is of vital importance in order to encourage both men and women to contribute to the medical profession. This will involve making programmes more women friendly and providing strong female mentorship for women undertaking specialty training. Well-organised and better-paid programmes may encourage more women to train and enter the workforce, and also incentivise men to practise medicine within their own countries.

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