Role of Gender Differences, Agency and Aspirations in Women's Medical Career Decisions

Evidence from Pakistan

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List of Acronyms

MBBS	Medicinae Baccalaureus, Baccalaureus Chirurgiae
FCPS	Fellow of College of Physicians and Surgeons
PKR	Pakistani Rupees
CPSP	The College of Physicians and Surgeons Pakistan
PMDC	Pakistan Medical and Dental Council

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Chapter 0: Abstract

In Pakistan, even though women constitute a majority of students in medical colleges, they are less likely to practice medicine or specialise, as compared to men. This research paper studies the labour market decisions made by women in medicine in Pakistan to explore why more men than women advance their medical careers.

The paper uses primary data collected from students and recent graduates in private medical colleges and affiliated hospitals in Rawalpindi and Islamabad, Pakistan. Using experimental and empirical evidence, the paper studies the differences between women and men in the profession, and analyses factors affecting women's sense of agency and career aspirations.

It is suggested that social pressures, gender roles, motivation levels, initial reasons for joining medical colleges and household characteristics may influence women's career aspirations and their sense of agency in career decisions.

Relevance to Development Studies

This paper deals with issues of gender, higher education, health and labour studies. It uses behavioural, economic and social dimensions to understanding decision-making.

Keywords

Doctors, behavioural economics, intrinsic motivation theory, gender roles, higher education, career decisions, Pakistan

Chapter 1: Introduction

Pakistan ranks at 143 out of 144 in the Global Gender Gap Report, making it a country with the second-worst situation of gender parity in the world (World Economic Forum, 2017). Even though the country has made marginal improvements in its score in the past three years (0.559 out of 1 in 2015 to 0.546 out of 1 in 2017), its gender gap score in 2014 was 0.552 and rank was 141 out of 145 (World Economic Forum, 2014, 2015, 2016 and 2017). This shows that the country's gender parity situation is fluctuating, at best, at a dangerously low position and is not at par with the improvements in other countries. One sub-statistic that stands out in recent reports on gender gap is that of enrolment in tertiary education. This score is relatively high for Pakistan, and even reached 1 (complete parity) in the 2016 report. This is the highest score for Pakistan as compared to any other indicators of education and gender in the report. What makes this more interesting is that other countries in the region generally have higher scores for lower levels of education than the tertiary level. This raises curiosity about (a) in a country with such systematic and widespread gender disparity, how is enrolment in tertiary education similar for women and men, and (b) what are the implications of a deeply gendered society on the experiences of women studying in these post-secondary education institutions?

One example of tertiary education which has higher enrolment of women than men is MBBS (Bachelor of Medicine) in Pakistan. It is also a gendered profession, as even though more women obtain MBBS degrees than men, still less women practice medicine or work at high-level positions[1]. This research paper aims to highlight whether women and men's aspirations, expectations and experiences differ in the medical profession, and what drives the aspirations and agency of women, using primary data from 493 respondents from Rawalpindi and Islamabad, Pakistan. The analysis focuses on MBBS students and doctors, using experimental and quantitative evidence.

This profession is especially interesting in the Pakistani context as it is arguably one of the most acceptable professions for women (Malik et al. 2010), and it may increase the probability of women being matched with 'quality' partners in marriage in a culture of arranged marriage[2]. Majority of the respondents in the sample agree that becoming a doctor is a socially suitable profession for women, and that female doctors may have better marriage prospects than women of other professions in Pakistan. The perception of 'better' marriage prospects may be because of the high social standing of the medical degree for women in Pakistani society (Masood 2017).

This paper studies the personal and social factors that shape labour market decisions in medicine, tackling the problem that disproportionately more women than men decide to leave the profession after graduation, and very few women specialise. It, thus, addresses issues related to the home and work environments that female and male students and graduates of medical colleges face. I compare women and men when they enter medical school (first year students), when they are about to finish medical school (5th years students) and after they have graduated (graduates). This information allows me to recognize the gaps and when they take place. I also study, in particular, the factors that

[1] In Punjab and Federal Areas, the number of registered specialists is 13,907 male and 6,881 female.

[2] Arranged marriage is a process by which the elders of the family decide or suggest matrimonial pairings. The rigidity of these decisions or suggestions depends on the household dynamics: in strict families, the couple may not have a choice to disagree with the elders' decisions, while more lenient families (majority of the cases), marriages are not decided without the consent of the couple.

affect women's sense of agency and their career aspirations when making labour market decisions as doctors.

In this paper I focus only on MBBS doctors and students in private institutions. The generalizability of the data and findings of the paper are limited to doctors in the urban areas of Rawalpindi and Pakistan, and affluent households, described in Chapter 4. The tuition fee in private medical colleges is PKR 950,000 per annum as compared to around PKR 30,000 in public colleges, supporting the fact that students who go to private medical institutions come from wealthy backgrounds, making the findings of this paper not generalizable to other segments of the society. Another aspect to keep in mind is that the nature and methodology of this paper does not allow me to draw causal inferences; as the study combines economic, sociological and psychological variables, similar to other studies in the field, it does not claim to show causality.

In this chapter, I provide a background of the issue and describe the present structure of the medical profession. In Chapter 2, I give a review of literature about similar studies in Pakistan and other countries. In Chapter 3, I explain the research methodology and analytical framework. In Chapter 4, I describe the data collection process and provide description of the sample. In Chapter 5, I discuss the results found in the empirical analysis, and in Chapter 6, I relate the findings to the main research question and give recommendations for further research.

1.1 The Problem

In Pakistan, being a doctor is a respectable profession for women, partly because it is accepted by society (BBC News 2015). This may be reflected by the trend that young women are encouraged to become doctors by their families[3], and in the past many years, female students have constituted a majority in medical colleges as over 70% medical students are women (Moazam and Shekhani, 2018; BBC News, 2015). The Pakistan Medical and Dental Council (PMDC) cites that on 28th February 2018, a total of 35,769 male and 37,057 female M.B.B.S. qualified doctors are registered in Punjab and Federal Areas of Pakistan. The number of registered female doctors is only slightly more than male, showing a difference between female enrolment rates and their rates of registration as practicing doctors. In this region, the number of registered specialists, after M.B.B.S., are 13,907 men and 6,881 women. It is interesting to note here that male specialists are more than twice as many as female. The high enrolment rates show that many female students study to become doctors, but there is a large proportion of women that leave the profession and do not register as licenced practicing doctors (lower rates of registration). Of the women who remain in the profession, very few actually specialise as indicated by the low specialisation rates for women. This decrease in number of women in medicine higher up the career ladder (in terms of knowledge and expertise) must be investigated. Even though many women prove their competence in medical college (the women in the dataset have better grades in medical college than the men), there may be systematic professional and social hurdles that influence their sense of agency, career preferences or hinder them from achieving excellence in the field, resulting in lower representation of women at senior level positions in medicine.

The lack of female doctors has resulted in problematic policy steps. For policymakers, it is challenging that there are more women than men enrolled in medical colleges, even though women are thought to be less likely to practice (Ali, 2014). In 2014, the PMDC

[3] This is reflected in the qualitative data collected for this research, discussed in Chapter 2

attempted to instate a quota to ensure equal numbers of female and male students, however, it was rejected by the judiciary and found to be unconstitutional (Ali, 2014). To present a picture of the meek healthcare provisions in the country, in 2015, the number of physicians (generalists and specialists) per 1,000 people in Pakistan was 0.98 (World Bank Open Data, ca. 2015).

Many qualified and presumably competent female doctors do not practice or specialise; if the reasons behind their decisions are deciphered and some of the impediments they face in their career progression can be minimised, well-informed policy measures can be put in place to improve the healthcare provision in the country. In this paper, I study the differences between female and male students and doctors that may explain why women and men make different decisions about practicing medicine or specialising. Moreover, I study the factors affecting the perception of agency that women in medicine have, and the reasons that influence their career aspirations.

1.2 Existing Structure of Medical Profession in Pakistan

In this section I describe the overall structure of the medical profession in Pakistan to elaborate how career decisions may be influenced by the nature of the profession itself. After 12 years of formal education, students apply for admission into medical colleges, where they pursue an MBBS. Students appear in medical college entrance tests, and their grades in school and the score in entrance tests decide if they will get into a medical college. Merit lists are drawn up based on the students' performance in school and entrance tests; 10% weight is given to grades in 10th year, 40% weight for grades in 12th year and 50% weight for entrance test scores (King Edward Medical University, ca. 2018). There is no age limit for enrolling in medical colleges. Each province and region has an admission committee that is overseen by the admission board at the national level (Government of Pakistan, 2016). Students with a minimum of 12 years of education and 60% marks are eligible to apply for admission to a medical college. Separate merit lists are made for each province and region, and also for reserved seats and quotas. The main difference between public and private medical colleges is tuition fees and merit; for private colleges the annual fee is fixed at 950,000 PKR (about € 6,000 to € 7,000), making it arguably the most expensive forms of higher education in the country (Ghani, 2018). The annual tuition fees for public medical colleges are about PKR 30,000 (about € 200). Every year, those with very high scores (around 90% and above for Punjab province) are able to enrol in public medical colleges, while others with lower scores opt for private ones (Staff Report, 2018).

The MBBS takes 5 years, after which students have to complete a mandatory year of practical training in a hospital, called a house job. Subsequently, they are able to register as doctors. During the house job, house officers are rotated to different departments in a hospital and have a very demanding schedule, especially in departments of gynaecology and medicine due to the nature of the work and greater patient load. It is not uncommon for house officers to have more than 24 hour duties several times a week. There is no set remuneration for house officers and many of them even work for free. After the house job, many doctors opt for jobs that do not require a specialisation. Two most common jobs of such nature are of a demonstrator in a medical college (giving tutorials etc. to medical students) and of a medical officer. A medical officer traditionally sees the highest influx of patients as they are responsible for referring patients to specialists, if need be. The work load of demonstrators and medical officers is not too challenging and many of them prepare for and take exams for specialisation while they work.

In Pakistan, an FCPS is done to become a specialist. There are two steps in this process. First, doctors have to clear an FCPS Part 1 examination which tests them on their knowledge of coursework during MBBS, and also specifically on the field they want to specialise in[4]. After clearing FCPS Part1, doctors train for 4 to 5 years, depending on the field of specialisation, as post graduate trainee officers. At this stage, there is a lot of study and work load, working hours are very challenging but the remuneration is better than non-trainee doctors. At the end of this process, doctors have to clear the FCPS Part 2 examination, after which they are specialists or consultants in their desired field. The workload after specialisation is relatively relaxed, and the remuneration is much better as well. There are options for second specialisations, and also other trainings; more details of these can be found on the website of College of Physicians and Surgeons Pakistan[5].

Career decisions may be based on time and monetary constraints, and on personal preferences. As describes above, the monetary benefits after house job and workload are low before FCPS part 1. Candidates who want to work, have time constraints and/or low monetary unfulfilled requirements may decide to be medical officers or demonstrators. Candidates who have high aspirations toward career developments, have low time constraints and/or high monetary unfulfilled requirements may decide to do specialisation. These dynamics are important in understanding the current research problem, however, career decisions are multifaceted and influenced by various social and psychological issues that I discuss in this paper.

[4] The College of Physicians and Surgeons Pakistan was set up in 1962 by an act of parliament to oversee this process (CPSP, n. d.).

[5] More information about FCPS and other trainings can be found here. https://www.cpsp.edu.pk/about-cpsp

Chapter 2: Literature Review

The literature review conducted for this paper is an overview and comparison of existing studies related to the main research question "Why do women in medicine make different labour market decisions than men[6]?" Quantitative studies (that use large data sets and employ a degree of statistical analysis) and qualitative studies (that have fewer respondents but are more in depth and nuanced) have been included in Chapter 2.1. While some studies provide behavioural insights of women and men in a similar professional setting around the world, others are more specific to medicine in Pakistan. Chapter 2.1 compares the quantitative and qualitative studies to identify gaps. These gaps are discussed in Chapter 2.2 to motivate this empirical investigation, explaining the contribution of this paper and drawing linkages to the pre-design qualitative survey based on 55 responses (Appendix C).

2.1 Review of Existing Literature

In this chapter, I begin by studying influential papers in the field of gender and career decisions that are not based in Pakistan. Later, I discuss existing literature that is related to career decisions of doctors in Pakistan, comparing the qualitative and quantitative studies to locate a gap.

Correll (2001) studies the importance of gender roles, and one's perception about their own gender in the career choices they make. People have biases about their abilities due to the cultural environment they live in. These social beliefs play an important role in career sorting of women and men, their self-opinion and, thus, career progression. This study was based on high school students, testing their views about their mathematical skills, while controlling for actual performance, and studying how these views affect their career goals. According to the paper, a quantitative line of work is heavily dominated by men, hence, the experiment focused on mathematical skills. It is found that males rate their skills above females, overestimating their competence relative to females with similar grades. The feedback effect of self-assessment was also found to be different for the two genders. Good performance improved self-assessment of females much more than males, implying that proof of good performance was very encouraging for girls. Good self-assessment of quantitative skills made females and males more likely to choose a quantitative profession, which highlights the role of perception of competence, gender stereotypes and career sorting. This paper is important as it uses an experimental approach to study behaviour and labour market decisions. It also shows that culture and other social factors influence career sorting and career progression since a young age, and that gender roles are entrenched in one's self-opinion and ambitions.

Wynarczyk (2007) is another interesting exploratory paper studying the lack of female executives in the science, engineering and technology sector in North East of England, using data from 60 small and medium-sized enterprises. It was found that there is underrepresentation of women higher up the career ladder, and that there seem to be systematic hurdles for women's career progression. This paper is also relevant for the research paper at hand, as it looks at a similar sector of natural sciences, and in keeping with the observation in Pakistan's medicine sector, there are fewer women in senior

[6] Labor market decisions, in this paper, refer to incorporates decisions to work, specialize, move abroad (or not) and get married as career is secondary.

positions. However, like the Shahab et al. (2013) paper, this paper does not explore in detail the reasons for the lack of women in advanced level positions in the sector.

Baqi et al. (2017) provide a gendered analysis of the issues faced by doctors in a government university hospital in Saudi Arabia. They conducted an anonymous online survey to study perceptions about gender equality, social pressures and systematic hurdles faced by women doctors. Using data from 304 respondents, it was found that most of the respondents observe gender equality in salary and benefits, but gender discrimination in entry into specific fields of specialization. Male respondents perceived less gender inequality than female, and female respondents were found to be more at risk of harassment from male patients than colleagues. This paper studies a society that may be similar in some respects to Pakistan. It also adopts a quantitative analysis and its methods and findings are useful for the research at hand. However, the questionnaire employed is narrow, like other studies discussed here (Shahab et al., 2013; Wynarczyk, 2007), as the reasons for the respondents' answers are not explored. Another limitation is that this survey was administered online, and the sampling issues are unclear.

Now I move on to studies that are more specific to the MBBS doctors in Pakistan. An explanation commonly given for the trend discussed in Chapter 1.1 in career sorting is that many female students are not interested in practicing medicine; they want to marry into affluent families[7], therefore, they become doctors (BBC News 2015)[8]. This narrative is commonplace in news articles and relatively less carefully researched mediums of communication. However, given the competitive exam that they pass to enter medical college and the challenging study load they go through for five years in college, this argument may be less valid than commonly perceived.

According to the other strand of reasoning, the medical system in Pakistan is structured in a way that it is incompatible with the predominantly 'family-oriented' lifestyle that women want to (or must) follow. There is a lack of proper childcare facilities, and usually no option for working mothers to work part-time (Syed 2016). For women, working as general practitioners is more feasible than working as a specialist. Women face pressure to do justice to their family and careers and most have to make a choice between the two, as family and career are not compatible given the current structures. This is common knowledge about the profession, giving advanced medicine a stereotype of a 'male-oriented' profession. This stereotype reiterates the obstacles women face as specialists, hence discouraging other women from following their footsteps (Moazam and Shekhani 2018). Masood (2017) presents these arguments in a detailed anthropological analysis of why women are underrepresented in medical sciences even though they are a majority in medical colleges, highlighting the 'complex issues of empowerment and agency' that come into play when deciding about career choice and progression (p. i). She uses ethnographic data, interviewing 60 female doctors and their families, in addition to policymakers and educators in Lahore, Pakistan. She finds that the work environment under question is embedded within gendered power structures that hinder women's career advancement in medicine. She also finds that some women do not consciously choose to become doctors but end up doing so as it is the most socially reputable field of study for them. She acknowledges that medical education is a 'symbolic and economic capital' for women (Masood 2017, 97), but that this is not the complete picture. She finds that female doctors lack the power of decision making and negotiation, and face dire

[7] In Pakistan, arranged marriages are prevalent; many families look for female doctors for their sons as it is a symbol of social standing.

[8] A newspaper article that gives more insight into marriage 'market' and doctors by Jajja (2012) may be relevant.

issues of mobility, work-life balance and segregation; these factors are intricately linked with their decision to specialize. Masood's (2017) work is a valid starting point for this research paper as it gives a contextual background of the gendered dimensions in medical practice in Pakistan.

Using data from four medical universities in Karachi, Pakistan, Moazam and Shekhani (2018) undertake a cross-sectional qualitative study of why many female graduates from medical college do not practice medicine. With the help of detailed interviews and focus-group discussions with final year students, they show that many young women are coerced into studying medicine by their parents as a safeguard for their future in case their marriage is short-lived. They find that the decision to practice medicine after completing MBBS is commonly not made by women themselves, but is the discretion of their husbands' and in-laws'. This paper is very useful as it studies the factors that lead to varying career paths of medical college students, however, it only includes observations from 24 female and 9 male students. Another limitation is that the participants were chosen via convenience sampling, therefore, there is a high risk of endogeneity.

I have compared the two qualitative studies by Masood (2017) and Moazam and Shekhani (2018) with the quantitative studies by Malik et al. (2010) and Shahab et al. (2013). Malik et al. (2010) study work-life balance of doctors in Peshawar, Rawalpindi and Islamabad, Pakistan. They explore work-life balance in the context of job satisfaction levels, turnover decisions and burnout. Based on quantitative data from 175 MBBS doctors, the paper finds that if there is high work-life balance, there is greater job satisfaction, lower risk of burnout and turnover. The paper also states that female doctors have higher job satisfaction than males. The authors write that the reason for this is that, "in Pakistan practicing medicine is considered as one of the most respectable professions for females" (p. 117). This seems to be a simplistic explanation of why female doctors are found to have higher job satisfaction, as it is a prestigious profession for men as well. The paper also does not take into account the household dynamics of the doctors, even though they play a part in the achievement of a work-life balance: there may be a varying load of house work that should be considered. Another finding is that for men, being autonomous at work leads to higher job satisfaction, while for women, tackling complicated and interesting tasks at work are of high value. The paper recommends that the job satisfaction of male doctors should be of focus to hospital management, so that their work environment and risk of burnout can be improved. This paper provides interesting insight into the work-life dynamics of doctors in Pakistan, but the analysis seems to be at surface-level. It leaves a lot of room for further deeper investigation as it does not explore the driving forces of women's and men's differing responses.

Shahab et al. (2013) also undertake a quantitative analysis, using cross-sectional data from 200 students from one university in Khyber Pakhtunkhwa, Pakistan. The survey questionnaire collected information on reasons for joining medical college, and career aspirations about the future. It was found that 48% of the females stated that they were uncertain about pursuing a medical career and some said that the decisions depended on their in-laws after marriage. This paper has an exploratory approach and the analysis is limited to description of the data collected. Another limitation is that it only investigates one university, therefore, the results are not generalizable to the region or similar universities. In addition, the paper does not reflect in-depth understanding of the factors affecting student aspirations, as this is not covered by the questionnaire.

The comparison between qualitative and quantitative studies on the gender dimension of the medical profession in Pakistan gives a useful background to the existing research, and

also highlights the spaces where further research may be productive. The contribution of this paper in discussed in the next Section.

2.2 Contribution and Motivations for Research Methodology

As a result of the literature review, three conclusions about the existing literature can be made. Firstly, there is minimal existing literature that studies the reasons for gender variations in labour market outcomes in the medical profession in Pakistan. There is lack of research that describes trends in career sorting in Pakistan and addresses the factors that drive these decisions; most of the research that does so focuses on Western societies. Secondly, qualitative studies have depth but lack external applicability because of small sample sizes, while the quantitative studies lack depth as they are mostly exploratory in nature. There is, hence, evident need for experimental and quantitative evidence that is more nuanced and has a larger and more diverse sample. Thirdly, the literature reviewed above also highlights the importance of the social contexts in which decisions are made, and how these contexts may be different for women and men. Hence, in the study at hand, I measure and analyse many variables previously used by quantitative and qualitative studies in this field, incorporating behavioural and empirical approaches that can address the tangible and subtle complexities of the problem at hand..

Review of existing literature on the same research question as the one at hand highlights that there are many tangible and non-tangible aspects of decision-making that are needed in order to present a complete picture. Tangible aspects refer here to the variables that are commonly used in microeconomic empirical studies, for example, household income, performance level, career aspirations and expectations, and other variables generated by means of simple survey questions. Non-tangible aspects of decision-making refer to the variables that are more complex to measure and are uncommon in such studies, for example, gender-career bias measured by implicit association tests, motivation levels measured by Intrinsic Motivation Theory questionnaires, career/family preferences measured by vignettes and social support measured by elicited emotions and their sources. This chapter is about the contribution of this study, highlighting why various aspects of decision-making are included in the analysis, unlike previous studies, driving inspiration from pre-design qualitative survey to motivate the research methodology.

The pre-design survey reflects the importance of motivation in career decisions for doctors in Pakistan. A common response for why they joined this profession, many respondents write that it was to please parents; a 21-year-old female respondent stating that it was to "fulfil dream of parents", while also stating that it was her own decision to become a doctor. Another 22-year-old female states, "parents' will but later become my will too", signalling that there may be a change in motivation levels during the course of the college degree. A 24-year-old male writes that his decision to join medicine was due to "family pressure", while another 26-year-old male says that it was his father's decision. Some respondents also write that it was their "dream" or "passion" to become doctors. Therefore, there seem to be many different reasons why one becomes a doctor, which also affect their commitment to the profession. A 29-year-old female respondent says that as she progressed through her medical degree, "I got more career oriented and wanted more to specialise and practice successfully," while a 26-year-old male respondent says that he became "serious, pessimistic, disappointed" as his training continued. About academic performance, most of the respondents say that they faced a lot of pressure to get good grades and clear the exams in the first attempt. There is also an indication that some students of private medical colleges feel mental tension as their education is very

expensive, so they have to perform well and succeed. Hence, in measuring motivation levels, variables about interest, sense of competence and choice, and mental stress, in addition to reasons for joining medical school, are used in the empirical analysis.

Many respondents of the qualitative survey cite pressures and expectation they face from society. Some respondents of the qualitative survey from private medical colleges say that they were taunted and made fun of for not getting in to public medical colleges due to higher merit. On the other hand, a 36-year-old female from a public medical college says that she did not feel any pressures, "My family was very supportive and helpful." This is another indication that the context of public and private medical colleges may be different, therefore, I decided to focus on private institutions only for the empirical analysis. Some female respondents say that they faced pressure to get married when they graduated, and many got married right after graduation. A 26-year-old female respondent says, "In our culture females are supposed to get married soon after their studies have been completed so I guess this was the only pressure." A 24-year-old male respondent says that most of the pressures he faced after graduation were about his choice of specialisation, "there seems to be a prejudice towards psychiatry. A doctor relative, a random professor and my father don't think of it as much of a field perhaps due to the holistic approach of it. And you are not earning (money) like say a surgeon would (like my businessman dad thinks)." This is another dimension of social pressure, as it may also affect doctors' choices of specialisation and, thus, important career decisions. In the analytical framework (Chapter 3.1), I have included variables of social support and social pressures for a detailed analysis of gender differences, agency and aspirations.

In the pre-design qualitative survey, many respondents pointed out how gender affects their career decisions. As a 20-year-old female medical student pointed out, "(this profession) is not well suited to my gender though. I mean, working among lots of male colleagues and patients can be overwhelming sometimes. You have to protect yourself all the time and be conscious. Be empathetic enough not to give patients a wrong signal." This is a highly loaded statement that highlights the role of security, how women feel working with men and male patients, and how careful they have to be to give appropriate gender signals. A 22-year-old female, private medical college student writes that "medical studies take too long and are too costly when taken up privately. So … the social norms were broken once a girl was spent so much money on, and was focusing more on her education than a simple 'aim your married life' target." This statement shows the gendered social pressures that many young women face in Pakistan: many are expected to prioritize getting married over building a career, and it is not common for households to spend large sums on higher education for women, although the trends may be changing. A 24-year-old male doctor states "I don't think (sex) has to do anything with whether you're cut out for this profession in isolation but societal/cultural problems which exist in a deeply patriarchal society do contribute to a lot of women not being able to practice." This reiterates that studying the role of gender may be central to this analysis. Thus, in this paper, we use multiple variables to incorporate the effect of gender in the quantitative analysis.

This paper aims to measure and analyse many variables that have not been previously included in quantitative studies on doctors in Pakistan. Motivated by Baqi et al. (2017), it includes multiple measures of gender and social pressures, like Shahab et al. (2013) variables on aspirations and expectation are employed. Inspired by Malik et al. (2010), I try to test the stereotypes about female doctors in Pakistan, and to do this I include gender roles and expectations, cultural dynamics and motivation levels highlighted by Masood (2017) and Moazam and Shekhani (2018). The analytical framework based on these

measures in detailed in Chapter 3.1, the variables are described in Chapter 3.3, and the questionnaire is given in Appendix B.

Chapter 3: Research Methodology

3.1 Hypotheses and Analytical Framework

The analysis will be undertaken in 3 steps, described as Model 1, Model 2 and Model 3, respectively, in Figure 1. The main research question is:

> "Why do women in medicine make different career decisions (to work, specialise, move abroad, switch professions or get married) than men?"

In order the analyze this question, I study the differences between females and males at the three career levels (Model 1), the sense of agency of women in the sample (Model 2), and women's career aspirations and their reasons (Model 3). Separate hypotheses have been derived from the literature review and qualitative survey to analyse each of the models in detail and comprehend this multifaceted research problem.

3.1.1 Model 1

In order to answer this research question, three hypotheses are drawn about possible differences between women and men in the sample:

> Hypothesis 1: women face greater social pressure than men to prioritise family life, while men are socially pressured toward career
>
> Hypothesis 2: men are intrinsically more career oriented than women

The first hypothesis highlights gender norms and roles that may translate into societal pressures on women and men. In this subset of the Pakistani population, it is common to expect that men earn a living while women look after the household. This mind-set may explain why more men than women achieve career progression, as it is also supported (not challenged) by societal norms. The second hypothesis refers to the idea that men are more dedicated or concerned about their careers than women, perhaps reflecting the role of gender norms as well. Hypothesis 2 incorporates the level of career motivation and performance that women and men have. The third hypothesis takes into account the positive value associated by the society for females to become doctors. This is also reinforced by the dominant perspective that female doctors have better marriage prospects. Therefore, it is hypothesised that females join medical college because of societal and familial pressures, while men do so independently.

In Model 1, statistical tests will be carried out to compare motivation levels, social support, career or family preference and gender-career bias. These comparisons are done, for women and men at the three career levels[9]. The last set of statistical tests will compare the reasons for joining medical profession for females and males, combined for all three career levels. The results for Model 1 are discussed in Section 5.1.

3.1.2 Model 2

In order to answer the main research question, five hypotheses are drawn about the sense of agency of women in the sample:

[9] For comparing women at the three career levels with each other, please see Appendix A1 Table 1

Hypothesis 3: women from affluent households with small number of household members have a higher sense of agency over career decisions

Hypothesis 4: women who face social pressure have a lower sense of agency over career decisions

Hypothesis 5: women from households where some decisions are made either by the husband/father or the wife/mother have lower sense of agency over career decisions

Hypothesis 6: women who decided to become doctors due to others' persuasion or to improve marriage prospects have a lower sense of agency over career decisions

Hypothesis 7: women who are more motivated have a higher sense of agency over career decisions

Hypothesis 3 is based on the idea that women from more affluent households have less financial constraints and may have greater agency. It also implies that women with fewer household members may be more able to align aspirations and expectations as there are less people involved in the decision-making. Hypothesis 4 refers to the idea that social pressure may facilitate a gap between aspirations and expectations, that women don't expect to realise their aspirations due to societal adversities. Hypothesis 5 implies that if household decision-making is centralised to a degree, that only husband or wife make decisions unilaterally without consultation, women's perception of agency will be low. Hypothesis 6 means that women who join this profession due to external and peripheral issues, not due to the merits and demerits of the profession itself, have a lower sense of agency as their decision-making is not aligned with the profession itself. Hypothesis 7 implies that women with more interest in medical profession, sense of choice and competence and lower mental pressure will have greater drive toward the medical profession and their sense of agency will be higher.

Model 2 explores how women set their aspirations and expectations of career outcomes, studying how women's agency changes with socioeconomic characteristics, social pressure, household gender dynamics, reasons for joining medicine, motivation levels and career levels. In Model 2, agency is defined as being able to do what one aspires towards. Model 2 is inspired by a paper by Luuk van Kempen (2009), where he discusses how aspirations and expectations shape each other, and one's wellbeing is driven by their perception of what they can achieve. Kempen states that subjective well-being should be considered in all development initiatives, as increased empowerment can lead to higher expectations, which may cause disappointments when they are not met by high outcomes. Therefore, in this model I use this relationship between aspirations and expectations and study why women are able to expect what they aspire toward, without making a value judgement on the aspirations themselves. I have information on expected career outcomes, not actual career outcomes, so the dependent variable represents women's perception of agency. The dependent variable in this model is a binary variable which is 1 if career preference (aspiration) does not match the likeliness of a career outcome (expectation), and 0 if career preference and likeliness of career outcome are in line. Separate logit regressions is used to specify models for each set of aspirations and expectations, described in Chapter 3.3.

$$p = pr\,[y = 1\,|x] = \beta_0 + \beta_1\alpha + \beta_2\omega + \beta_3\gamma + \beta_4\delta + \beta_5\theta + \varepsilon$$

Where

y = gap between aspirations and expectations;

$$y \begin{cases} 0\ if\ aspirations\ and\ expectations\ are\ in\ line\ with\ each\ other \\ 1\ if\ aspirations\ and\ expectations\ aren't\ in\ line\ with\ each\ other \end{cases}$$

α = socioeconomic characteristics

ω = social pressure

γ = household gender dynamics

δ = reasons for joining medicine

θ = motivation level

ε = error term

The explanatory variables and hypotheses of this model have been derived from the literature review and pre-design qualitative survey (discussed in Chapter 2.2). They are factors that may be connected with women's decision-making process, either by inhibiting their processes towards goal achievement, or enabling them. In this model, all aspirations are treated equally, as the dependent variable only shows whether or not the aspiration is expected to be fulfilled. The results for Model 2 are discussed in Chapter 5.2.

3.1.3 Model 3

To answer the main research question, four hypotheses are drawn about career aspirations of women in the sample:

> Hypothesis 8: women align their career preferences with the social pressure they face
>
> Hypothesis 9: women who choose career over family, have high preference for career development[10]
>
> Hypothesis 10: women who decided to become doctors because they were persuaded by others, or to improve marriage prospects, have low preference for career development[11]
>
> Hypothesis 11: women who are more motivated have high preference for career development

Hypothesis 8 implies that women prefer career outcomes that are in line with the social pressure they face. Hypothesis 9 means that females who choose career are more likely to aspire towards career progression. Hypothesis 10 refers to the idea that if women become doctors to improve marriage prospects or because they are persuaded by others are less likely to aspire toward career advancement. Hypothesis 11 implies that women with more interest, sense of choice, competence and lower mental pressure due to their medical career may aspire toward career development.

Model 3 studies the factors that help explain the different aspirations of women. Respondents were asked to rate 6 different career possibilities from 1 (least preferred) to 5 (most preferred). These career possibilities are not working, working but not

[10] High preference means aspiring toward specialization or moving abroad

[11] Low preference means preferring not to specialize or work, and to get married as career is secondary

specialising, specialising, moving abroad for career advancement, switching to a field other than medicine and getting married as career is secondary. Separate ordered probit regressions are run for each of these career possibilities, and results discussed in Chapter 5.3.

$$y_i = \beta_0 + f(\beta_1\omega + \beta_2\mu + \beta_3\sigma + \beta_4\delta + \beta_5\theta) + \varepsilon$$

Where

y = career aspirations, for each aspiration, i;

$$y \begin{cases} 1 \; if \; career \; prospect \; is \; least \; prefered \\ 5 \; if \; career \; prospect \; is \; most \; prefered \end{cases}$$

ω = social pressure

μ = gender roles (gender-career bias)

σ = preference between career and family (family/career preference)

δ = reasons for joining medicine

θ = motivation levels

ε = error term

The explanatory variables in Model 3 are also derived from and discussed in Chapter 2.2. Model 3 controls for socioeconomic characteristics, and both the models 2 and 3 control for college level fixed effects and career level fixed effects. Detailed descriptions of dependent and explanatory variables are given in Chapter 3.3.

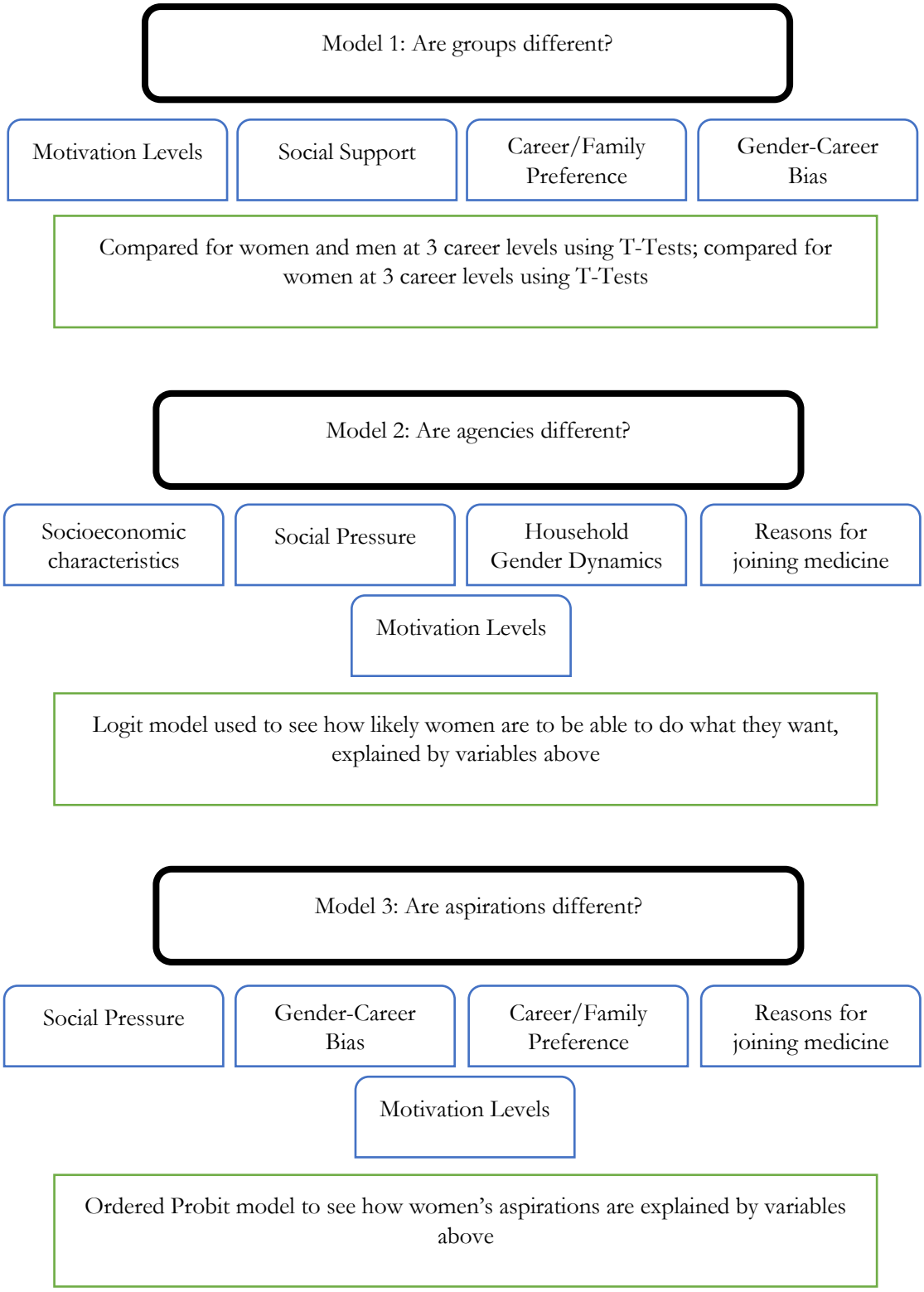

Figure 1: An overview of the empirical analysis undertaken, including the dependent and explanatory variables used, and the type of regressions run

3.2 The Questionnaire

The questionnaire collects information on socioeconomic background, demographics, gender roles, social pressures, aspirations, expectations and experiences of participants of the 3 cohorts (Appendix B). The survey questionnaire was divided into 6 sections. The first section collected information on socioeconomic background and household gender dynamics, the second section collected data on gender-career biases and marriage prospects of doctors through vignettes, and the respondents' personal preference between family and career. Section 3 collected information about social pressure and social support. It contained questions on the social pressures felt by the respondents, and about the sources of social support and the emotions elicited by this support. Self-reported information about interest, competence, choice and mental tension[12] was collected in section 4, and section 5 had questions about aspirations and expectations. The last section was about the Implicit Association Tests conducted for gender-career bias on smartphones (Project Implicit, ca. 2018). The next section gives more details on the variables that are important to the analytical framework described in Chapter 3.1.

3.3 Description of Variables

In this section I explain the variables that are used in models 1, 2 and 3 described in Chapter 3.1 above, in the same sequence as they appear in the questionnaire (Appendix B). A summary of the description and units of variables is given in Appendix A0.

Socioeconomic and demographic variables (section 1 in Appendix B) include information about the respondents' individual and household characteristics. The variable 'gender' takes the value 0 for female and 1 for male, age is given in years, while marital status is 0 for single, 1 for engaged, 2 for married, 3 for separated, 4 for divorced and 5 for other[13]. Health is 1 if the respondent experienced health issues in the last 6 months, 0 otherwise. The variable 'rooms in house' contains the total number of rooms in the household; there are also variables on the gender of the household head and the number of household members. Household income shows annual income of the household divided into 4 income brackets, 0 to 960,000 rupees, 960,000 to 1,444,000 rupees, from 1,444,000 to 1,920,000 rupees, from 1,920,000 to 2,400,000 rupees and then 2,400,000 rupees and above. There is also a variable about the number of household members that do not earn a living. The variable housing status shows if the respondent resides in a house they own, rent or stay at rent-free[14]. These variables are analysed as the explanatory variables in Model 2, and as control variables in Model 3.

Giménez and Calabrò (2017) provide a detailed analysis of existing research on the importance of gender roles in women's decision-making, from an institutional economics perspective, using a sample of 101 articles. They find that gender roles are a dominant informal institution (not officially codified) that influences and shapes other formal and informal institutions, affecting the decisions made by women and men. They write that gender is socially constructed, along with feminine (family-focused, nurturing etc.) and

[12] The word 'tension' is used in the instrument employed, instead of 'stress'

[13] It is uncommon for people to disclose their dating status and this is usually kept very private. Therefore, this category is not included in the list.

[14] Living rent-free is not uncommon in Pakistan as some people have rent-free accommodation as they live with their relatives, or are government or military employees (under some conditions), etc.

masculine (earning-focused, strong etc.) behavioural characteristics. These associations of personality characteristics with the sexes reiterate gender roles and influence people's decision-making. Gender stereotypes (widespread notions of what a particular sex can/will do) are part of social norms that affect people's perception of their capabilities and opportunities. In the paper at hand, I study household gender dynamics, gender-career perceptions and gender-roles based social pressures. To study the household gender dynamics of decision-making (section 1 in Appendix B), the respondents were asked about 6 different decisions that are made in households. They were asked to select if the wife, husband, both husband and wife, or someone else made these decisions. If the respondent was married, they answered about themselves, otherwise, they answered about their parents or another married couple that makes decisions in the household. The household gender dynamics are used in Model 2 as explanatory variables.

The gender-career bias/perception was measured using vignettes (section 2 in Appendix B). 3 different situations implying 3 family-career dilemmas were given to the respondents. The first vignette asks if respondents advise Fatima to prioritise her career or her family responsibilities, measuring if they suggest family, career or both for women in similar situations as their own. The second vignette asks similar advise for Ali, where he can choose family, career or both, measuring how they suggest career and family for men. The third vignette gives the situation of a stay-at-home father and husband, with a working mother/wife. This vignette measures how respondents' advice is based on gender roles, and how they associate the genders with career and family. Dummy variables were created to study the effect of each association as an explanatory variable in Model 3, and to make comparisons in Model 1.

The respondents were also asked about their own preference between career and family (or both), if they did not have any financial constraints (section 2 in Appendix B). This variable is used in Model 1 to make comparisons, and in Model 3 as an explanatory variable.

Social support refers to the support we can expect or receive from our social network. An exploration of the idea of social support and its measurement is provided by Tardy (1985). In labour market decisions, the social support that one has is central to decision-making. Social support can not only influence the career one opts for (based on their present and expected social support), it can also affect the time and effort one is able to put into that career, and hence, career progression. The importance of social support in the case of a medical career is reiterated by Walsh (2013), where she finds that female doctors (in England) are more likely to experience burnout than males; female doctors obtain useful social support from male colleagues which reduces their stress levels and inclination to quit the profession. To estimate social support, respondents were asked to think of someone who affects their career decisions and relate the emotions that they feel due to the selected people (section 3 in Appendix B). The respondents first write down the initials of a specific person, to anchor their thought process to an individual at a time, then they specify which category that person belong to (either they are a relative, friend, colleague, acquaintance or others) and then they select multiple emotions elicited by that person from a list of 6 emotions (fear, joy, disgust, trust, surprise, anticipation) derived from the Wheel of Emotions by Robert Plutchik (Gomes, 2017). Gomes (2017) discusses the application of this concept in measurements related to behavioural economics. The information gathered through this section of the survey has been translated into 30 variables, each signifies a combination of one category of people and one emotion. For example, if a respondent feels joy from their friend and no one else, the variable for friend and joy will be 1, and the 5 variables for each type of relation with joy will be 0. These

variables have been used in model 1 to compare social support for females and males at the three career levels.

Based on the qualitative information collected prior to survey design, social pressure is measured by asking about the social pressures respondents may face about career and life decisions (section 3 in Appendix B). Three different forms of pressure were identified (pressure to get married, earn a living and look after household) and respondents were asked if their fellow classmates of the same gender, or they themselves faced these pressures. The variables on pressure to look after the household were not used in the analysis as it was later found to be an ambiguous term. These variables of social pressure were used in Model 1 to make comparisons using t-tests, and in models 2 and 3 as explanatory variables.

The work of Gagné and Deci (2005) on competing theories of motivation provides a valid understanding of motivation and its application to labour decisions. They compare Self-Determination Theory and Cognitive Evaluation Theory in work and educational settings and emphasise that intrinsic motivation is vital in improving ones overall motivation in a process. Touré-Tillery and Fishbach (2014) also provide a similar analysis. I use a measurement instrument of the Intrinsic Motivation Theory to measure motivation levels based on 4 self-reported subscales (Ryan et al., n. d.). The subscales are interest/enjoyment, competence, choice and pressure/tension (section 4 in Appendix B). Other important papers that use this and similar instruments are Deci et al. (1999), Murayama et al. (2010) and McAuley et al. (1989). The respondents are asked to consider the pursuit of a medical career as a task and rate 22 statements from 1 (not at all true) to 7 (very true). The scoring is done for the 4 subscales and they are used as separate variables, with only the pressure/tension variable being negatively related to intrinsic motivation. Missing values for motivation variables are where there is no response in the 22 questions of the motivation section in survey (Appendix B). These variables are used to test differences between females and males at the three different career levels in Model 1, and they are used as explanatory variables in models 2 and 3.

The survey also collects information on why respondents decided to join the field of medicine and enrolled in medical college (section 5 in Appendix B). The respondents are asked to rate 5 possible reasons, derived from the pre-design qualitative survey, from 1 (least important) to 5 (most important). This variable is used to make comparisons between females and males via t-tests, to clarify if, indeed, people of the two genders join this profession for different reasons. These variables are also used in models 2 and 3 as explanatory variables.

Information about respondents' aspirations and expectations is collected by asking them to rate 6 possible career outcomes, derived from the qualitative data (section 5 in Appendix B). For aspirations, respondents rate each career outcome from 1 (least preferred) to 5 (most preferred). Respondents were able to rate multiple career outcomes for each preference level. The variables about aspirations are used as dependent variables in Model 3 to study why women aspire toward different career outcomes. For expectations, respondents rate the career outcomes from 1 (least likely) to 5 (most likely). These variables are used to derive the variables on gaps between aspirations and expectations, used as dependent variables in Model 2. The gap variables are 1 where there is a gap between aspirations and expectations, and 0 otherwise.

Chapter 4: Data and Descriptive Statistics

4.1 Primary Data Collection

Primary research was conducted using field experiments for a quantitative analysis. As a first step, open-ended online questionnaire responses were collected from students and graduates from medical colleges around Pakistan for a qualitative overview of the problem. This survey is given in Appendix B. Based on these responses, vignettes, survey questionnaires and implicit association tests were designed and used for the quantitative analysis. Data was collected in medical colleges and hospitals around Rawalpindi and Islamabad, Pakistan, from female and male students and graduates. Only MBBS students and graduates are researched, not dentists. Data from three different cohorts was collected: 1st and 5th year students in medical colleges and early career doctors[15]. Medical colleges were approached to facilitate research by enabling access to current and past students. The research aims to highlight how the aspirations, expectations and experiences of participants (1) are different for women and men, (2) are different for the three cohorts, (3) are shaped by various social aspects, and (4) change due to intrinsic motivation levels.

Written consent was obtained from medical colleges where the data collection was done, and verbal consent was attained from all participants. 4 enumerators were hired to assist with data collection. Manually printed surveys were circulated and filled. The responses were later recorded digitally into an excel spreadsheet. An internet connection was needed for the Implicit Association Test. Connectivity issues were faced for this section of the survey.

The data collection was done from 1st August, 2018, to 10th September, 2018. On the first day, enumerators were trained, printing and logistical tasks were completed. Pilot surveys were tested and discussed with 4 women and 2 men of roughly the same demographic as the target population, but not associated with the medical profession. The survey was also tested on a group of 25 final year, medical college students. Revisions were made to the questionnaires and data collection method based on the testing. A target of 300 observations in total was kept[16]. Location of the survey experiment was in 2 private colleges and hospitals in Rawalpindi and 1 private medical college and hospital in Islamabad. In the data collection process, a cluster sampling approach has been used. Within each college, maximum available respondents from the 3 cohorts (1st year and 5th year students and graduates) were surveyed. 1st year students were easily reached in their classrooms during breaks. 5th year students were scattered around hospitals and classrooms so they were somewhat difficult to reach. Graduates were most challenging to reach as they were either busy working, had switched careers, moved away or had given up their careers. The numbers of doctors working in hospitals and colleges were, as expected, much lower than the numbers of students found in classrooms. Some graduates were reached through extended social networks of the data collection team. Some of the respondents are women who graduated from medicine and no longer work, while none of the respondents switched to another field or moved abroad, as yet. Some respondents (mostly graduates) were also found through snowball sampling and they were surveyed

[15] In the survey, there was an option for 3rd gender but none of the respondents selected it
[16] This is not based on power calculation, only gauged from feasibility concerns

at venues of their convenience. Respondents were not explicitly told about the gender aspect of the survey to avoid social desirability bias.

4.2 Socio-economic characteristics of the participants

In the dataset, there are a total of 493 observations. Table 1 gives details of how many women and men are there in the sample, and in each of the three career levels. Overall, 64.1% of the sample is female, and a majority of the 1st year, 5th year and graduate cohorts are also females. 59.63% of the sample comes from 1st year medical students, while 14.20% of the sample comes from graduates. Almost all of the data (98.78% of the dataset) comes from 3 medical colleges and affiliated hospitals. There are only 6 people from other medical colleges and hospitals and they are all graduates.

Table 1

Variable(s)	Proportions of respondents		
Gender	64.10% female	35.90% male	
Current career level	59.63% 1st year students	26.17% 5th year students	14.20% graduates
Gender and level	61.90% in 1st year are females	57.36% in 5th year are females	85.71% of graduates are females

Table 1: The proportion of respondents according to gender and career level

Table 2 shows the socioeconomic characteristics of all groups combined. As the data mostly comprises of students and early-career doctors, the average age of the respondents is 21.5 years, similar across females and males. 87.6% of the sample are single, while 6.3% are married. Marital status is similar across female and male respondents. There are 4 variables that represent the economic situation of the respondent and their household. The average annual income of the sample is around 1,920,000 PKR[17] (160,000 PKR per month). According to the Household Integrated Economic Survey 2015-2016, the sample fits the top quintile of distribution of monthly household income in Pakistan (Pakistan Bureau of Statistics, 2017). The average monthly income for the top quintile in Pakistan is PKR 60,451, while the average income of the top quintile in urban Punjab is PKR 68,975. Household income is similar for female and male respondents. The average number of rooms (including all types of rooms) in the household is 9.3; it is greater for female respondents than for males. The mean land owned by the household is 2,550 marlas, which is about 64,500 square meters. The land owned by male respondents' households is much greater than land owned by female respondents'. Housing status, however, is similar across female and male respondents, with 82% of the sample residing in houses owned by their household. These 3 variables show that the sample comes from an affluent segment of the society, so the findings of this paper are not generalizable to the whole country or region. On average, female respondents are found to be less healthy than male respondents. The size of the household is larger for male respondents, and female respondents are more likely (although still a low probability) to be from female headed households[18].

[17] about € 13,000; according to Numbeo, cost of living is 71.91% lower in Pakistan than the Netherlands (Numbeo 2018), the income bracket of the sample my entail a highly comfortable standard of living in Pakistan.

[18] 7% of the households are female-headed; of these households, 82.4 percent of the respondents are females.

Table 2: Descriptive Statistics - Means (Standard Error)				
	Total	Female	Male	H_0: $X_F = X_M$ p-values
Age	21.52 (.1423)	21.63 (.1963)	21.32 (.1852)	0.28
Marital status	.2414 (.0337)	.2563 (.0399)	.2147 (.0615)	0.56
Household income	2.486 (.0790)	2.560 (.0965)	2.345 (.1372)	0.20
Rooms in house	9.338 (.2248)	9.758 (.2710)	8.543 (.3934)	0.01***
Land owned by household	2550 514.2	1049 (294.2)	4332 (1048)	0.00***
Housing status	.3211 (.0320)	.3471 (.0407)	.2743 (.0515)	0.28
Health	.6265 (.0219)	.6688 (.0266)	.5511 (.0376)	0.01***
Number of household members	6.312 (.1753)	5.901 (.1253)	7.052 (.4310)	0.00***
Gender of the household head	.9350 (.0118)	.9175 (.0168)	.9661 (.0136)	0.05**

*Table 2: The socioeconomic descriptive statistics for all groups combined; *, **, *** significant at 10, 5, 1 percent, respectively.*

Chapter 5: Results

In this chapter, I first present the results of the regressions run according to the analytical framework in Chapter 3.1; the findings for each model are discussed in Chapter 5.1.4 for Model 1, Chapter 5.2.7 for Model 2 and Chapter 5.3.7 for Model 3.

5.1 Model 1

In this model, t-tests are done to compare motivation levels, social support, career or family preferences and gender-career bias for women and men at the three career levels. Chapters 5.1.1 to 5.1.3 present the findings from Model 1; the implications and possible reasons for the findings are discussed in Chapter 5.1.4 in relation to the first two hypotheses[19].

5.1.1 T-Test comparisons for 1st year students

Table 3 shows the comparisons for 1st year students. It is suggested that motivation levels are similar for women and men.

In Table 3, only the social support variables that show a difference between female and male respondents are presented. It is found that trust from colleagues is more for males than for females. This is relevant as it may reflect the difference in study environments as perceived by the two gender in the sample. It is also found that anticipation from others is more for females. It is unclear how this can be interpreted, as I do not know who females have categorized as others.

Social pressures felt by females and males in this sample also show some differences. Male respondents are more likely to perceive that their male colleagues face pressure to earn a living. They are also more likely to feel pressure to earn a living themselves than their females counterparts.

It is interesting to note that gender-career bias is similar for females and males in 1st year students. The Implicit Association Test variable shows in addition, that students have low (mean of 1.5) implicit association bias between gender and career[20].

Personal preference between family and career irrespective of financial constraints is also similar for females and males.

[19] For a discussion on T-Test comparisons for reasons for joining medicine for females and males, combined for all three career levels, please see (Appendix A1 Table 2).

[20] The mean value is around slight automatic association of male with career and female with family

Table 3: T-Test comparisons for 1st year students - Means (Standard Error)				
	Total	**Female**	**Male**	**H_0: $X_F = X_M$ p-values**
Motivation Levels				
Interest	31.51 (.5037)	32.12 (.6250)	30.52 (.8412)	0.12
Competence	21.80 (.3236)	21.58 (.4120)	22.161 (.5232)	0.38
Choice	22.37 (.3582)	22.77 (.4746)	21.71 (.5352)	0.15
Tension	18.81 (.3635)	18.92 (.4728)	18.63 (.5682)	0.70
Social Support				
Trust felt from colleagues	.1455 (.0275)	.1048 (.0300)	.2167 (.0536)	0.05*
Anticipation felt from others	.2059 (.0311)	.2455 (.0412)	.1333 (.0443)	0.09*
Social Pressure				
Pressure felt by fellows to get married	.1062 (.0181)	.1209 (.0242)	.0818 (.0263)	0.30
Pressure felt by fellows to earn a living	.1952 (.0232)	.0989 (.0222)	.3545 (.0458)	0.00***
Pressure felt to get married	.0608 (.0178)	.0818 (.0263)	.0687 (.0149)	0.49
Pressure felt to earn a living	.1684 (.0220)	.1105 (.0234)	.2636 (.0422)	0.00***
Gender-Career Bias				
Females: career or family	.7857 (.0284)	.7802 (.0370)	.7946 (.0442)	0.81
Males: career or family	1.069 (.0429)	1.067 (.0526)	1.071 (.0736)	0.96
Female & Males: Career or family	.8259 (.0355)	.8571 (.0455)	.7748 (.0568)	0.26
Implicit Association Test	1.478 (.0690)	1.490 (.0846)	1.457 (.1191)	0.81
Career or Family Preference				
Personal preference: career or family	.9690 (.0231)	.9505 (.0262)	1 (.0436)	0.30
Number of observations	**294**	**182**	**112**	

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.1.2 T-Test comparisons for 5th year students

Table 4 shows the comparisons between females and males in 5th (and final) year of medical college. It is found that motivation levels are similar, except for self-reported mental tension. Female respondents suffer more from mental tension than males.

One of the factors that may explain, or be in line with, why females feel tension, females also feel more fear from colleagues than males, while males feel more joy from colleagues. This gives more context to the social environment that women and men are surrounded in when they make career decisions.

The dynamics of social pressure also show some differences in 5th year of medical college. Pressure felt by fellows and respondents to get married is higher for females. Pressure felt by fellows and respondents to earn a living is higher for males.

According to Table 4, some interesting differences can also be seen in gender-career perceptions in 5th year students. Female respondents associate women more with family than males. Females also seem to suggest family for women and career for men more than males. More frequently, males suggest career for women and family for men, than females. T-test for Implicit Association Tests, however, shows no difference between biases of females and males. This may be because the Implicit Association Test is based on how fast the brain makes connections between genders and career, and this is developed at early stages in life[21].

There are also significant differences between personal preference of career and family. Female respondents prefer career much less than male respondents, and male respondents choose career over family significantly more than females. Female and male respondents choose family over career in similar frequency.

[21] For more discussion on the Implicit Association Test, please see https://implicit.harvard.edu/implicit/user/pimh/index.jsp

Table 4: T-Test comparisons for 5th year students - Means (Standard Error)				
	Total	**Female**	**Male**	**H_0: $X_F = X_M$ p-values**
Motivation Levels				
Interest	32.21 (.8008)	31.90 (1.119)	32.63 (1.136)	0.65
Competence	22.50 (.5305)	21.91 (.7019)	23.29 (.8050)	0.20
Choice	22.20 (.5113)	22.28 (.7047)	22.10 (.7431)	0.86
Tension	18.32 (.6154)	19.32 (.8972)	17.00 (.7675)	0.06*
Social Support				
Fear from colleagues	.1053 (.0410)	.1714 (.0646)	0.00 (0.00)	0.04**
Joy from colleagues	.1186 (.0425)	.0556 (.0387)	.2174 (.0879)	0.06*
Social Pressure				
Pressure felt by fellows to get married	.2171 (.0364)	.2973 (.0535)	.1091 (.0424)	0.01**
Pressure felt by fellows to earn a living	.3256 (.0414)	.2027 (.0471)	.4909 (.0680)	0.00***
Pressure felt to get married	.0859 (.0249)	.1233 (.0387)	.0364 (.0255)	0.08*
Pressure felt to earn a living	.2188 (.0367)	.1370 (.0405)	.3273 (.0639)	0.01***
Gender-Career Bias				
Females: career or family	.7209 (.0453)	.7838 (.0519)	.6364 (.0794)	0.11
Males: career or family	1.085 (.0651)	1.054 (.0900)	1.127 (.0938)	0.58
Female & Males: Career or family	.8527 (.0624)	.7568 (.0741)	.9818 (.1054)	0.07*
Implicit Association Test	1.560 (.0991)	1.571 (.1218)	1.543 (.1707)	0.8894
Career or Family Preference				
Personal preference: career or family	.9690 (.0290)	1.014 (.0304)	.9091 (.0536)	0.07*
Number of observations	**129**	**74**	**55**	

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.1.3 T-Test comparisons for Graduates

In the sample, there are only 10 male graduates, so the findings may not be very generalizable. Motivation levels towards a career in medicine are similar for females and males (Table 5). Males feel more fear from colleagues, but also more trust. While females feel more joy from relatives and disgust from friends. These findings give a mixed picture of the social environment graduates face; there are positive and negative differences in family and career aspects.

Social pressures show similar trends as 5th year students. Pressure felt by fellows and respondents to earn a living is greater for males, while pressure felt by fellows to get

married is higher for female graduates. It should be noted that 47% women and 70% men are single in this sample.

Gender-career perceptions for females and males are different for the genders in this sample. Male respondents more frequently suggest career over family for women, while female respondents suggest both career and family for women. Females more frequently suggest career for men, while males suggest family for men. In the third situation, males are more likely to suggest family for women and career for men. However, the most popular response is suggesting both career and family for females and males (the respondents don't have to pick one over the other, they can prioritise both family and career).

Table 5: T-Test comparisons for Graduates - Means (Standard Error)				
	Total	**Female**	**Male**	**H_0: $X_F = X_M$ p-values**
Motivation Levels				
Interest	31.47 (.9196)	31.86 (.9812)	29.2 (2.603)	0.31
Competence	22.00 (.6215)	22.24 (.6354)	20.60 (2.115)	0.35
Choice	23.76 (.5544)	23.91 (.6301)	22.9 (.9363)	0.52
Tension	18.37 (.8209)	18.24 (.8852)	19.10 (2.292)	0.71
Social Support				
Fear from colleagues	.0690 (.0479)	.0385 (.0385)	.3333 (.3333)	0.06*
Joy from relatives	.7442 (.0673)	.775 (.0669)	.3333 (.3333)	0.10*
Disgust from friends	.2069 (.0766)	.6667 (.3333)	.1538 (.0722)	0.04**
Trust from colleague	.1875 (.0701)	.1429 (.0673)	.5 (.2887)	0.09*
Social Pressure				
Pressure felt by fellows to get married	.5303 (.0619)	.5893 (.0663)	.200 (.1333)	0.02**
Pressure felt by fellows to earn a living	.1667 (.0462)	.0714 (.0347)	.7 (.1528)	0.00***
Pressure felt to get married	.1324 (.0414)	.1207 (.0431)	.200 (.1333)	0.50
Pressure felt to earn a living	.1029 (.0371)	.0690 (.0336)	.300 (.1528)	0.03**
Gender-Career Bias				
Females: career or family	.7101 (.0623)	.7458 (.0622)	.500 (.2236)	0.17
Males: career or family	.8841 (.1002)	.7627 (.1063)	1.600 (.1633)	0.00*
Female & Males: Career or family	.9421 (.0649)	.9831 (.0662)	.700 (.2134)	0.13
Implicit Association Test	1.35 (.1457)	1.484 (.1727)	.8889 (.2003)	0.09*
Career or Family Preference				
Personal preference: career or family	1.029 (.0411)	1.034 (.0416)	1.00 (.1491)	0.77
Number of observations	**70**	**60**	**10**	

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.1.4 Discussion

The results from Model 1 above show that hypotheses 1 and 2 from Chapter 3.1.1 can now be discussed for the sample at hand: private medical college students and early career doctors in Rawalpindi and Islamabad, Pakistan.

> Hypothesis 1: women face greater social pressure than men to prioritise family life, while men are socially pressured toward career

For 1st year medical college students, evidence in favour of Hypothesis 1 has been found, as men seem to face more pressure toward earning than women. At this early stage of their careers, women feel less pressure to work and earn than men do. This finding is in line with Hypothesis 1, and shows that at this level for the sample, men are more socially pressured toward career. In 5th year, female respondents and their fellows face more pressure to get married than males, while male respondents and their fellow male classmates face more pressure to earn a living. Similar to the findings from 1st year students, these findings support Hypothesis 1 as men are pressured toward career and women are pressured toward starting a family. For graduates in the sample, pressure felt by fellows and respondents to earn a living is greater for males, reiterating the trend that males face more social pressure toward career. Pressure felt by fellows to get married is higher for female graduates. As majority of female graduates in the sample are engaded or married, as expected, many of them do not face pressure to get married. Hence, the findings from graduates also show evidence for Hypothesis 1, that women face social pressure toward family and men toward career. Overall, there is evidence in favour of Hypothesis 1, as men at all three career levels face more social pressure to earn a living and women in 5th year of medical college and graduates face more pressure to get married.

Hypothesis 2: men are intrinsically more career oriented than women

For 1st year medical students, similar levels of motivation are found for females and males. This provides evidence against Hypothesis 2, as men at this career level are not found to be more motivated toward a medical career than women. Students do not suggest career and family differently for women and men. This finding is also conflicting to Hypothesis 2, as it shows that 1st year medical students are equally interested in career, regardless of their gender. In 5th year of medical college, female respondents suffer more from mental tension than males. According to Intrinsic Motivation Theory, discussed in Chapter 3.3, tension in negatively related to motivation levels, therefore, it may be that women in 5th year of medical college in the sample are less motivated toward pursuing a medical career than males. This may provide evidence in favour of Hypothesis 2 as men may be more 'career-oriented'. In the gender-career bias dimension, females associate women with family and men with career, while males suggest career for females and family for males. The findings about gender-career perceptions do not provide evidence in favour of Hypothesis 2, as both females and males associate career with the other gender, so the evidence is mixed. However, when personal preference is compared, there is some evidence in favour of Hypothesis 2 as male respondents choose career over family significantly more than females. For graduates in the sample, motivation levels toward a career in medicine are similar for females and males, which shows that they may be equally career oriented, contrary to Hypothesis 2. It seems that there are mixed differences in gender-career perceptions for graduates. One trend may be clear that females specifically prefer career less frequently, but men also seem reluctant towards career. This, again, does not show evidence for Hypothesis 2 that males are more career oriented than females. The evidence against Hypothesis 2 is also supported by the finding that males' and females' own preference is similar for career and/or family at this level. Hence, I have not found much evidence in favour of Hypothesis 2. The motivation levels for the three career levels are similar for females and males, and the findings from gender-career bias are mixed and do not show that one gender is more oriented toward career than another.

Model 1 has not only built a perspective on the first 2 hypothesis of this paper, it has also painted a picture of the environment that students and young graduates face in the medical career in some private institutes of Pakistan, and how this environment may

change over time. In models 2 and 3, I focus on women in the sample, combined for all 3 career levels, to study their sense of agency and aspirations in detail.

5.2 Model 2

I now study the sense of agency of women in the sample, and which factors may affect it. More details of the model are given in Chapter 3.1, and details of the variables used are given in Chapter 3.3. For this analysis, I incorporate positive and negative direction of gaps in aspirations and expectations to understand the driving forces behind these gaps. A positive gap occurs when the aspiration for a career outcome is higher and the expectation of it happening is lower (expectations exceed aspirations). A negative gap occurs when the aspiration for a career outcome is lower and the expectation of it happening is higher (aspirations exceed expectations). The direction of the gap is only for understanding the nature of the gap; the logit regressions use a binary variable of gap (1) or no gap (0).

Chapters 5.2.1 to 5.2.6 present the findings from Model 2; the implications and possible reasons for the findings are discussed in Chapter 5.2.7 in relation to hypotheses 3, 4, 5, 6 and 7.

5.2.1 Gap in not working

The direction of this gap is unclear, as the frequency of positive and negative gaps are almost normally distributed around 0 (Appendix A2).

From the socioeconomic indicators, age and number of rooms in the household help explain agency (Table 6). An increase in age would increase the probability of experiencing a gap between aspirations and expectations of not working by 3 percentage points. A decrease in number of rooms in the household will increase the probability of this gap by 1 percentage point. The coefficients for other economic variables are not significant.

When studying social pressure, only the pressure felt by the respondent to get married is significant; feeling this pressure decreases the probability of facing this gap by 8 percentage points.

Household gender dynamics are not significant for gap between aspirations and expectations in not working. On the other hand, as the importance of improving marriage prospects as a reason to become a doctor increases, the probability of facing this gap increases, by 3 percentage points. Motivation levels are not significant when explaining this gap. For graduates, the probability of facing this gap increases by 14 percentage points.

Table 6: Gap Not Work		
Variable	**dy/dx (Std. Err.)**	**P>|z|**
Socioeconomic characteristics		
Age	.0309 (.013)	0.02**
Marital status	.0589 (.0519)	0.26
Health	-.0076 (.0483)	0.88
Rooms in house	-.0132 (.0078)	0.09*
Number of household members	.0117 (.0113)	0.30
Non-earning members of the household	.0028 (.0140)	0.84
Household income	-.0010 (.0126)	0.94
Housing status	.0165 (.0306)	0.59
Gender of the household head	.0571 (.0909)	0.53
Social Pressure		
Pressure felt by fellows to get married	.0050 (.0714)	0.94
Pressure felt by fellows to earn a living	.1179 (.1104)	0.29
Pressure felt to get married	-.0779 (.0461)	0.09*
Pressure felt to earn a living	.0337 (.0730)	0.64
Household gender dynamics		
Some household decisions made by both husband and wife	-.1099 (.1131)	0.33
Some household decisions made by husband	-.0034 (.0400)	0.93
Some household decisions made by wife	.0574 (.0647)	0.38
Some household decisions made by other	-.0037 (.0435)	0.93

Reasons for joining medicine		
To serve as a doctor and help people	.0018 (.0241)	0.94
To earn a comfortable living	-.0091 (.0191)	0.63
To please parents and loved ones	-.0026 (.0197)	0.90
To have better marriage prospects	.0311 (.0137)	0.02**
I did not want to join this field but was persuaded	.0272 (.0199)	0.17
Motivation Levels		
Interest	.0021 (.0028)	0.44
Competence	.0010 (.0050)	0.84
Choice	-.0036 (.0052)	0.49
Tension	.0036 (.0032)	0.25
N		215
Pseudo R^2		0.2326

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.2.2 Gap in not specialising

Now I study the gap between expectations and aspirations of not specializing after house job. The direction of the gap, in this case is predominantly negative; the effects found in the model may be driven by why people rank this career prospect lowly as an aspiration, but think it is more possible (Appendix A2).

Having worse health conditions (suffering from health problems in the last six months), increases the probability of facing this gap by 23 percentage points (Table 7). As the number of non-earning members in the household increase, the probability of facing a gap in not specializing decreases by 5 percentage points. As household income increases, the probability of facing this gap increases by 4 percentage points. As housing status changes from owned to rented and rent fee, the probability of facing this gap decreases by 10 percentage points.

I also find that facing pressure to earn a living, decreases the probability of women facing this gap by 16 percentage points.

Table 7: Gap Not Specialise Variable	dy/dx (Std. Err.)	P>|z|
Socioeconomic characteristics		
Age	.0473 (.0296)	0.11
Marital status	-.1494 (.0972)	0.12
Health	.2323 (.0652)	0.00***
Rooms in house	-.0128 (.0085)	0.13
Number of household members	.0177 (.0207)	0.39
Non-earning members of the household	-.0472 (.0267)	0.08*
Household income	.0398 (.0244)	0.10*
Housing status	-.0975 (.0549)	0.08*
Gender of the household head	.0291 (.1245)	0.82
Social Pressure		
Pressure felt by fellows to get married	.0850 (.0915)	0.35
Pressure felt by fellows to earn a living	.0713 (.1397)	0.61
Pressure felt to get married	-.1426 (.0965)	0.14
Pressure felt to earn a living	-.1630 (.0895)	0.07*
Household gender dynamics		
Some household decisions made by both husband and wife	-.1333 (.1488)	0.37
Some household decisions made by husband	-.0316 (.0713)	0.66
Some household decisions made by wife	-.0395 (.0905)	0.66
Some household decisions made by other	.0179 (.0713)	0.80

Reasons for joining medicine		
To serve as a doctor and help people	.0013 (.0380)	0.97
To earn a comfortable living	.0453 (.0358)	0.21
To please parents and loved ones	-.0355 (.0305)	0.24
To have better marriage prospects	.0203 (.0306)	0.51
I did not want to join this field but was persuaded	.0442 (.0340)	0.19
Motivation Levels		
Interest	.0041 (.0057)	0.466
Competence	-.0092 (.0084)	0.276
Choice	.0054 (.0068)	0.425
Tension	.0072 (.0055)	0.187
N		215
Pseudo R^2		0.1386

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.2.3 Gap in specialising

The direction of the gap in this case is positive, as more women aspire to specialise but do not expect that it will happen (Appendix A2). Facing the pressure to get married decreases the probability of facing this gap by 15 percentage points (Table 8). If some decisions of the household are specifically made by the husband, the probability of facing this gap increases by 10 percentage points. The probability of facing this gap increases by 4 percentage points if being persuaded to join this field contrary to one's will is a major factor in joining medical profession. Having a high level of interest in pursuing medicine decreases the probability of facing this gap by 0.6 percentage points.

Table 8: Gap Specialise Variable	dy/dx (Std. Err.)	P>|z|
Socioeconomic characteristics		
Age	.0069 (.0118)	0.56
Marital status	.0709 (.0658)	0.28
Health	-.0501 (.0620)	0.42
Rooms in house	.0014 (.0069)	0.84
Number of household members	.0025 (.0140)	0.86
Non-earning members of the household	-.0129 (.0180)	0.47
Household income	.0255 (.0180)	0.16
Housing status	-.0341 (.0375)	0.36
Gender of the household head	.1355 (.1050)	0.20
Social Pressure		
Pressure felt by fellows to get married	.0729 (.0729)	0.32
Pressure felt by fellows to earn a living	.1166 (.1189)	0.33
Pressure felt to get married	-.1512 (.0511)	0.00***
Pressure felt to earn a living	.0107 (.0824)	0.90
Household gender dynamics		
Some household decisions made by both husband and wife	.0284 (.0670)	0.67
Some household decisions made by husband	.1029 (.0602)	0.09*
Some household decisions made by wife	-.0418 (.0587)	0.48
Some household decisions made by other	-.0233 (.0536)	0.66

Reasons for joining medicine		
To serve as a doctor and help people	-.0163 (.0272)	0.55
To earn a comfortable living	.0060 (.0283)	0.83
To please parents and loved ones	-.0082 (.0230)	0.72
To have better marriage prospects	.0297 (.0244)	0.22
I did not want to join this field but was persuaded	.0407 (.0213)	0.06*
Motivation Levels		
Interest	-.0069 (.0041)	0.10*
Competence	-.0027 (.0050)	0.59
Choice	.0077 (.0051)	0.14
Tension	.0058 (.0040)	0.15
N		216
Pseudo R^2		0.1825

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.2.4 Gap in moving abroad for career advancement

The direction of this gap is positive, as more female respondents experiencing the gap aspire to move abroad but think that they will not be able to (Appendix A2).

As age increases, the probability of facing this gap decreases by 4 percentage points (Table 9). If health problems were faced in the past six months, the probability of facing this gap increases by 16 percentage points. As the number of members in the household increase, the probability of experiencing the gap increases by 3 percentage points. As household income increases, the probability of facing this gap increases by 4 percentage points.

Social pressure explanatory variables are not significant in this model.

An interesting finding is that if some of the main household decisions are specifically made by the wife/mother, the probability of facing this gap decreases by 13 percentage points.

If helping people is an important reason for becoming a doctor, the probability of facing this gap in moving abroad for career progression increases by 9 percentage points. If being persuaded to join the field is a major reason for joining medicine, the probability of facing this gap increases by 8 percentage points.

It is also found that mental stress is important in women's sense of agency; as level of self-reported mental tension increases, the probability of facing this gap increases by 1 percentage point.

Table 9: Gap move abroad Variable	dy/dx (Std. Err.)	P>|z|
Socioeconomic characteristics		
Age	-.0404 (.0233)	0.08**
Marital status	.0156 (.0855)	0.855
Health	.1574 (.0637)	0.01***
Rooms in house	-.0066 (.0075)	0.381
Number of household members	-.0305 (.0186)	0.10*
Non-earning members of the household	.0149 (.0226)	0.51
Household income	.0432 (.0223)	0.05**
Housing status	-.0747 (.0464)	0.11
Gender of the household head	-.0133 (.1358)	0.92
Social Pressure		
Pressure felt by fellows to get married	.1024 (.0904)	0.26
Pressure felt by fellows to earn a living	.1486 (.1611)	0.36
Pressure felt to get married	-.1218 (.1059)	0.25
Pressure felt to earn a living	-.0725 (.0997)	0.47
Household gender dynamics		
Some household decisions made by both husband and wife	.0500 (.1081)	0.64
Some household decisions made by husband	.0336 (.0663)	0.61
Some household decisions made by wife	-.1313 (.0713)	0.07**
Some household decisions made by other	.1099 (.0735)	0.14

Reasons for joining medicine		
To serve as a doctor and help people	.0924 (.0348)	0.01***
To earn a comfortable living	-.0283 (.0339)	0.40
To please parents and loved ones	-.0076 (.0276)	0.78
To have better marriage prospects	.0469 (.0296)	0.11
I did not want to join this field but was persuaded	.0768 (.0304)	0.01***
Motivation Levels		
Interest	-.0058 (.0051)	0.26
Competence	-.0036 (.0073)	0.62
Choice	.0101 (.0063)	0.11
Tension	.0118 (.0050)	0.02**
N		216
Pseudo R^2		0.1364

*Notes: *, **, *** significant at 10, 5, 1 percent, respectively.*

5.2.5 Gap in switching to another profession

The direction of this gap is uncertain, as the frequency of positive and negative gaps are almost equally distributed around 0 (Appendix A2).

For non-single women, the probability of facing this gap in switching increases by 16 percentage points (Table 10). As the number of household members increases, the probability of facing this gap increases by 2 percentage points. As the number of non-earning members of the household increases, the probability of facing this gap decreases by 3 percentage points. With increasing household income, the probability of facing this gap increases by 4 percentage points.

Social pressure variables are not significant. Similar to my findings above, if some of the main household decisions are made by the wife/mother, the probability of facing this gap between aspirations and expectations in switching careers decreases by 13 percentage points.

If serving people is an important reason for joining medicine, the probability of facing this gap increases by 7 percentage points. If improving marriage prospects is an important factor to become a doctor, the probability of the gap increases by 5 percentage points. If one did not want to pursue medicine but was persuaded, the probability of experiencing the gap increases by 8 percentage points. As levels of choice and tension increase, the probability of facing this gap increases by 13 and 0.8 percentage points, respectively.

Table 10: Gap switch Variable	dy/dx (Std. Err.)	P>|z|
Socioeconomic characteristics		
Age	-.0069 (.0114)	0.55
Marital status	.1627 (.0655)	0.01***
Health	.0644 (.0462)	0.16
Rooms in house	-.0093 (.0059)	0.11
Number of household members	.0231 (.0125)	0.07*
Non-earning members of the household	-.0281 (.0167)	0.09*
Household income	.0366 (.0175)	0.04**
Housing status	-.0384 (.0451)	0.40
Gender of the household head	-.1091 (.0985)	0.27
Social Pressure		
Pressure felt by fellows to get married	-.0292 (.0604)	0.63
Pressure felt by fellows to earn a living	-.0676 (.0713)	0.34
Pressure felt to get married	.0110 (.0967)	0.91
Pressure felt to earn a living	-.0479 (.0858)	0.58
Household gender dynamics		
Some household decisions made by both husband and wife	.0409 (.0639)	0.52
Some household decisions made by husband	.0415 (.0493)	0.40
Some household decisions made by wife	-.1303 (.0435)	0.00***
Some household decisions made by other	-.0227 (.0544)	0.68

Reasons for joining medicine		
To serve as a doctor and help people	.0670 (.0299)	0.03**
To earn a comfortable living	-.0379 (.0296)	0.2
To please parents and loved ones	.0283 (.0212)	0.18
To have better marriage prospects	.0456 (.0221)	0.04**
I did not want to join this field but was persuaded	.0762 (.0248)	0.00***
Motivation Levels		
Interest	-.0047 (.0036)	0.19
Competence	.0082 (.0053)	0.12
Choice	.0130 (.0055)	0.02**
Tension	.0085 (.0036)	0.02**
N		211
Pseudo R^2		0.2245

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.2.6 Gap in getting married, career is secondary

The direction of this gap is largely negative, which means that more women do not highly aspire toward this outcome, but expect that it is likely to happen.

As the marital status changes from single, the probability of facing this gap increases by 23 percentage points (Table 11). As seen previously, with increasing household income, the probability of facing this gap increases by 8 percentage points. Social pressure and household gender dynamics variables are not significant independent variables in this model.

As seen for perceptions of agency regarding other career decisions, if not wanting to join medicine but being persuaded was an important reason for women to become doctors, the probability of facing this gap, between aspiring and expecting to get married, increases by 12 percentage points. In addition, if higher levels of tension related to medical career are felt, the probability of facing this gap increases by 1 percentage points.

Table 11: Gap get married Variable	dy/dx (Std. Err.)	P>|z|
Socioeconomic characteristics		
Age	-.0135 (.01905)	0.48
Marital status	.2254 (.0869)	0.01***
Health	.0423 (.0697)	0.54
Rooms in house	-.0117 (.0081)	0.15
Number of household members	-.0004 (.0156)	0.98
Non-earning members of the household	.0152 (.0214)	0.48
Household income	.0849 (.0239)	0***
Housing status	-.0047 (.0533)	0.93
Gender of the household head	-.0557 (.1230)	0.65
Social Pressure		
Pressure felt by fellows to get married	.0112 (.0865)	0.90
Pressure felt by fellows to earn a living	.1776 (.1537)	0.25
Pressure felt to get married	-.0833 (.1069)	0.44
Pressure felt to earn a living	-.0983 (.0865)	0.26
Household gender dynamics		
Some household decisions made by both husband and wife	.0008 (.1210)	1.00
Some household decisions made by husband	.0341 (.0715)	0.63
Some household decisions made by wife	-.1019 (.0698)	0.14
Some household decisions made by other	.0844 (.0723)	0.24

Reasons for joining medicine		
To serve as a doctor and help people	.0232 (.0335)	0.49
To earn a comfortable living	-.0148 (.0340)	0.66
To please parents and loved ones	-.0071 (.0287)	0.80
To have better marriage prospects	.0406 (.0266)	0.13
I did not want to join this field but was persuaded	.1152 (.0270)	0***
Motivation Levels		
Interest	.0024 (.0051)	0.63
Competence	.0043 (.0071)	0.54
Choice	.0058 (.0063)	0.35
Tension	.0140 (.0050)	0.01***
N		216
Pseudo R^2		0.1817

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.2.7 Discussion

The results presented in Chapter 5.2 above allow me to discuss the hypotheses for Model 2.

> Hypothesis 3: women from affluent households with small number of household members have a higher sense of agency over career decisions

For the gap in aspirations and expectations of not working, the coefficients for most economic variables are not significant. The variable of number of rooms in household, on its own, holds little meaning. However, for agency gaps in not specialising, moving abroad for career advancement, switching to a field other than medicine, and getting married, it is also found that women from more financially able households think that they have less agency. This is an interesting finding, as it is contrary to Hypothesis 3 that with wealth comes more autonomy; the issue is more nuanced. One possible explanation of this could be the distribution of assets within the household – if assets and capital are predominantly controlled by men in the household, more wealth of the household may not increase the agency of women. If there is a higher number of non-earning household members, women are more likely to experience a gap between aspirations and expectations of not specialising and switching to another career; women may think that they are less able to act on their career aspirations if there are more dependents in the household, the labour market decisions may depend more on the requirements of the household than what is aspired toward. Similarly, as the number of members in the household increase, the probability of experiencing agency gaps in moving abroad and switching to another field also increase. It may be that in larger households, labour market decisions for women are more complicated than for women in smaller households, perhaps due to more stakeholders involved in decision-making. Hence, there is evidence supporting the second part of Hypothesis 3, but not the first part: women from more

affluent households may have lower sense of agency, while women from households with fewer members may have higher sense of agency.

In addition to Hypothesis 3, Model 2 also provides some evidence that less healthy women and women in serious romantic relationships may perceive agency gaps more often.

> Hypothesis 4: women who face social pressure have a lower sense of agency over career decisions

In relation to Hypothesis 4, it is found that for career outcomes of not working, not specialising and specialising, women who face social pressures are less likely to perceive agency gaps between aspirations and expectations. This is a very interesting finding, and contrary to Hypothesis 4, it may imply that social pressure helps women align aspirations and expectations. This may be an intriguing topic for further investigation about how social pressure may lead to higher perceived agency.

> Hypothesis 5: women from households where some decisions are made either by the husband/father or the wife/mother have lower sense of agency over career decisions

If some decisions of the household are specifically made by the husband/father, the probability of facing a gap between aspirations and expectations in specialising increases. This may be because a degree of paternalistic control of power in the household may make the decision-making process seem more centralised to women (daughters and wives), leading them to feel that they cannot achieve what they desire for themselves. On the other hand, women from households where some of the main decisions are specifically made by the wife/mother, have a greater sense of agency in moving abroad or switching to another field. This implies that if a degree of maternalistic control of power is felt in the household, women (daughters and wives) may feel a greater sense of agency about their career decisions. This finding contrasts with that of paternalistic control of power in the gap of specialising. Hence, I find mixed evidence for Hypothesis 5 as a degree of paternalistic control of power in the household may reduce women's sense of agency, while a maternalistic control on decision-making could increase it.

> Hypothesis 6: women who decided to become doctors due to others' persuasion or to improve marriage prospects have a lower sense of agency over career decisions

In the sample, many women say that they did not want to become doctors but were persuaded by others[22]. If this is the case, they are likely to have a lower sense of agency regarding their decision to specialise, move abroad for career progression, switch to another profession and/or get married as career is secondary. This shows that women who were unable to independently make the decision about becoming a doctor have a lower perception of agency when making decisions about future career decisions as well. The gap between aspiration and expectation of switching to another field is more likely for women who became doctors for better marriage prospects. Hence, in keeping with Hypothesis 6, if women's decision to become a doctor is due to someone else's persuasion, their aspirations and expectations seem to be less aligned, leading to lower sense of agency.

[22] 27 women rate this as the most important reason for enrolling in medical college, and 16 women rate this as the second most important reason.

Hypothesis 7: women who are more motivated have a higher sense of agency over career decisions

Some evidence supporting Hypothesis 7 has been found as women with more interest in medical career have a greater sense of agency about their decision to specialise. Mental pressure is a negative indicator of motivation; women who report higher mental pressure have lower sense of agency regarding decisions of moving abroad, switching to another profession and getting married. This shows that with lower levels of motivation and higher mental tension due to medical career, sense of agency may decrease. Interestingly, it is found that if women have a greater sense of choice regarding their medical career, they are more likely to face a gap in switching to another profession. This is an interesting finding as it would be expected that if the level of choice to become a doctor is high, then they may not aspire to switch to another field, but their expectations are unclear. This may be an avenue for further research. Overall, some evidence in favour of Hypothesis 7 has been found, however, the magnitudes may be small.

5.3 Model 3

I now discuss the factors that may explain the career preferences of women in the sample, combined for all three career levels. This chapter presents the findings from Model 3; the implications and possible reasons for the findings are discussed in Chapter 5.3.7 in relation to hypotheses 8, 9, 10 and 11.

5.3.1 Preference of not working

The first regression (Table 12) explores the preference of not working after house job as the dependent variable. Social pressures are not significant in this regression. For gender-career perceptions, females who suggested family for women are less likely to aspire not to work. However, those who suggested career for women and family for men are more likely to prefer not working. Females who choose career over family (regardless of financial considerations), are less likely to prefer not working, while those who will choose family are more likely to prefer not to work (24 percentage points more likely to select preference level 3 out of 5 for not working). Another trend that can be seen is that as improving marriage prospects becomes an important factor for becoming a doctor, one is more likely to prefer not to work. A similar trend is seen for being persuaded to join medicine. Motivation levels are not significant for this regression.

Table 12 - Dependent variable: Prefer not to work					
	Outcome y = 1 (least preferred)	Outcome y = 2	Outcome y = 3	Outcome y = 4	Outcome y = 5 (most preferred)
Variable	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)
Social Pressure					
Pressure felt by fellows to get married	-.0018 (.0210)	.0008 (.0095)	.0009 (.0102)	.0001 (.0011)	.0000 (.0002)
Pressure felt by fellows to earn a living	-.0676 (.0572)	.0267 (.0243)	.0345 (.0283)	.0050 (.0059)	.0013 (.0020)
Pressure felt to get married	.0097 (.0171)	-.0045 (.0082)	-.0046 (.0082)	-.0005 (.0007)	-.0001 (.0002)
Pressure felt to earn a living	-.0393 (.0409)	.0163 (.0156)	.0197 (.0225)	.0026 (.0035)	.0006 (.0011)
Gender-Career Bias					
Suggest career for women	-.0201 (.0265)	.0088 (.0110)	.0099 (.0138)	.0012 (.0018)	.0003 (.0005)
Suggest family for women	.0276*** .0101	-.0137** (.0060)	-.0126** (.0057)	-.0011 (.0009)	-.0002 (.0003)
Suggest career and family for women	-	-	-	-	-
Suggest career for men	-.0144 (.0295)	.0063 (.0124)	.0070 (.0149)	.0008 (.0020)	.0002 (.0005)
Suggest family for men	.0120 (.0188)	-.0055 (.0089)	-.0058 (.0092)	-.0006 (.0009)	-.0001 (.0002)
Suggest career and family for men	-	-	-	-	-
Suggest career for women, family for men	-.1203* (.0682)	.04378* (.0264)	.06267* (.0377)	.0107 (.0088)	.0032 (.0043)
Suggest family for women, career for men	-.0058 (.0229)	.0026 (.0100)	.0028 (.0114)	.0003 (.0013)	.0001 (.0003)
Suggest career and family for women and men	-	-	-	-	-
Career/Family Preference					
Choose career	.0430*** (.0157)	-.0202** (.0087)	-.0203** (.0092)	-.0021 (.0017)	-.0004 (.0006)
Choose family	-.4634* (.2431)	.0998** (.0417)	.2351** (.1091)	.0804 (.0662)	.0480 (.0683)
Choose both	-	-	-	-	-

Reasons for joining medicine					
To serve as a doctor and help people	-.0036	.0016	.0017	.0002	.0000
	(.0088)	(.0039)	(.0043)	(.0005)	(.0001)
To earn a comfortable living	.0091	-.0041	-.0044	-.0005	-.0001
	(.0077)	(.0035)	(.0041)	(.0005)	(.0002)
To please parents and loved ones	.0052	-.0023	-.0025	-.0003	-.0001
	(.0078)	(.0035)	(.0038)	(.0005)	(.0001)
To have better marriage prospects	-.0181***	.0082**	.0088**	.0010	.0002
	(.0067)	(.0038)	(.0039)	(.0007)	(.0003)
I did not want to join the field but was persuaded	-.0238***	.0107**	.0115***	.0013	.0003
	(.0078)	(.0047)	(.0047)	(.0009)	(.0003)
Motivation Levels					
Interest	-.0003	.0001	.0001	.0000	3.05e-06
	(.0011)	(.0005)	(.0006)	(.0000)	(.0000)
Competence	-.0000	.0000	.0000	2.03e-06	4.10e-07
	(.0018)	(.0008)	(.0009)	(.0001)	(.0000)
Choice	.00025	-.0001	-.0001	-.0000	-2.69e-06
	(.0015)	(.0007)	(.0008)	(.0001)	(.0000)
Tension	-.0011	.0005	.0005	.0001	.0000
	(.0012)	(.0006)	(.0006)	(.0001)	(.0000)
N					213
Pseudo R^2					0.3272

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.3.2 Preference of working in medicine but not specialising

The preference not to specialise may be explained by social pressure, gender-career bias and reasons for joining medicine (Table 13). If there is pressure felt by fellow women to get married, the probability of preferring not to specialise increases. Comparing this with the outcome for the preference of specialising shows that the results are contradictory. So, I focus instead on the pressure felt personally to get married. As this pressure increases, the probability of preferring not to specialise may decrease[23]. In addition, if one faces the pressure to earn a living, they are more likely to prefer not to specialise. As expected, it is also found that if women choose family over career, the probability of preferring not to specialise increases[24].

[23] Marginal effect is significant only for outcome 4 but the direction of the effect is mostly negative
[24] Marginal effect is significant only for outcome 2 but the direction of the effect is mostly positive

Table 13 - Dependent variable: Prefer to work in medicine but not specialise					
	Outcome y = 1 (least preferred)	Outcome y = 2	Outcome y = 3	Outcome y = 4	Outcome y = 5 (most preferred)
Variable	**dy/dx (Std. error)**	**dy/dx (Std. error)**	**dy/dx (Std. error)**	**dy/dx (Std. error)**	**dy/dx (Std. error)**
Social Pressure					
Pressure felt by fellows to get married	-.2112**	.0773**	.0813**	.0378*	.0149
	(.0919)	(.0319)	(.0398)	(.0202)	(.0109)
Pressure felt by fellows to earn a living	.0008	-.0003	-.0003	-.0001	-.0000
	(.1276)	(.0547)	(.0474)	(.0191)	(.0064)
Pressure felt to get married	.1689	-.0847	-.0581	-.0201**	-.0059
	(.1118)	(.0665)	(.0369)	(.0101)	(.0042)
Pressure felt to earn a living	-.2687**	.0811***	.1059*	.0562	.0255
	(.1290)	(.0269)	(.0558)	(.0388)	(.0223)
Gender-Career Bias					
Suggest career for women	.0877	-.0395	-.0319	-.0123	-.0040
	(.0723)	(.0339)	(.0262)	(.0108)	(.0038)
Suggest family for women	.1701	-.0875	-.0577	-.0194	-.0055
	(.1320)	(.0784)	(.0405)	(.0142)	(.0040)
Suggest career and family for women	-	-	-	-	-
Suggest career for men	-.0996	.0397	.0377	.0162	.0059
	(.0958)	(.0342)	(.0378)	(.0184)	(.0076)
Suggest family for men	.0072	-.0031	-.0027	-.0011	-.0004
	(.0809)	(.0349)	(.0300)	(.0120)	(.0040)
Suggest career and family for men	-	-	-	-	-
Suggest career for women, family for men	-.1519	.0547	.0589	.0275	.0108
	(.1197)	(.0352)	(.0494)	(.0281)	(.0117)
Suggest family for women, career for men	-.0869	.0350	.0329	.0140	.0050
	(.0908)	(.0342)	(.0346)	(.0167)	(.007)
Suggest career and family for women and men	-	-	-	-	-
Career/Family Preference					
Choose career	.0739	-.0342	-.0266	-.0100	-.0031
	(.1349)	(.0676)	(.0468)	(.0163)	(.0052)
Choose family	-.2734	.0730***	.1087	.0617	.0299
	(.3001)	(.0276)	(.1221)	(.1010)	(.0596)
Choose both	-	-	-	-	-

Reasons for joining medicine					
To serve as a doctor and help people	-.0182	.0078	.0068	.0027	.0009
	(.0337)	(.0144)	(.0126)	(.0052)	(.0018)
To earn a comfortable living	.0312	-.0133	-.0116	-.0047	-.0016
	(.0333)	(.0145)	(.0125)	(.0052)	(.0019)
To please parents and loved ones	-.0013	.0006	.0005	.0002	.0001
	(.0321)	(.0137)	(.0119)	(.0048)	(.0016)
To have better marriage prospects	-.1329***	.0569***	.0494***	.0200***	.0067*
	(.0281)	(.0156)	(.0133)	(.0075)	(.0035)
I did not want to join the field but was persuaded	-.0625**	.0267**	.0232*	.0094*	.0032
	(.0303)	(.0133)	(.0123)	(.0054)	(.0021)
Motivation Levels					
Interest	-.0001	.0000	.0000	9.84e-06	3.32e-06
	(.0051)	(.0022)	(.0019)	(.0008)	(.0003)
Competence	.0000	-.0000	-.0000	-5.18e-06	-1.74e-06
	(.0076)	(.0033)	(.0028)	(.0011)	(.0004)
Choice	-.0022	.0009	.0008	.0003	.0001
	(.0078)	(.0033)	(.0029)	(.0012)	(.0004)
Tension	.0044	-.0019	-.0016	-.0007	-.0002
	(.0057)	(.0025)	(.0021)	(.0009)	(.0003)
N					213
Pseudo R^2					0.1567

*Notes: *, **, *** significant at 10, 5, 1 percent, respectively.*

5.3.3 Preference of specialising

When studying the preference to specialise as the dependent variable (Table 14), in many cases the correlations with outcome 5 are different from others, in magnitude and direction. If there is pressure felt by fellows to get married, the probability of preferring to specialise decreases, however, the probability of selecting specialisation as the most preferred outcome increases (contradictory to results discussed above). If women in the sample choose family over career, regardless of financial considerations, they are 52 percentage points less likely to choose specialisation as their most preferred career outcome. However, women who choose family are more likely to have specialisation as their 3rd or 4th preferred career outcome. If having better marriage prospects is an important reason for deciding to become a doctor, women are 6 percentage points less likely to have specialisation is the most preferred career outcome. They are more likely to have specialisation as their 2nd, 3rd or 4th preferred career outcome. Similar is the case for those who decide to become doctors due to others' persuasion. They are less likely to have specialisation as their most preferred career outcome. In motivation levels, as the sense of competence of women increases, they are 1 percentage point more likely to have specialisation as their top preference, and less likely to have it as a lower preference.

Table 14 - Dependent variable: Prefer specialise					
	Outcome y = 1 (least preferred)	Outcome y = 2	Outcome y = 3	Outcome y = 4	Outcome y = 5 (most preferred)
Variable	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)
Social Pressure					
Pressure felt by fellows to get married	-.0010	-.0052	-.0173	-.0665*	.0899*
	(.0010)	(.0040)	(.0111)	(.0383)	(.0512)
Pressure felt by fellows to earn a living	-.0006	-.0030	-.0101	-.0395	.0532
	(.0009)	(.0045)	(.0154)	(.0654)	(.0852)
Pressure felt to get married	.0005	.0022	.0068	.0229	-.0324
	(.0020)	(.0099)	(.0290)	(.0905)	(.1313)
Pressure felt to earn a living	.0044	.0175	.0450	.1212	-.1882
	(.0056)	(.0215)	(.0428)	(.0802)	(.1444)
Gender-Career Bias					
Suggest career for women	-.0004	-.0019	-.0061	-.0226	.0310
	(.0007)	(.0035)	(.0112)	(.0426)	(.0575)
Suggest family for women	.0036	.0146	.0376	.1014	-.1572
	(.0063)	(.0210)	(.0496)	(.0929)	(.1663)
Suggest career and family for women	-	-	-	-	-
Suggest career for men	.0005	.0023	.0072	.0249	-.0349
	(.0012)	(.0051)	(.0155)	(.0501)	(.0714)
Suggest family for men	.0008	.0038	.0116	.0392	-.0554
	(.0013)	(.0057)	(.0159)	(.0504)	(.0722)
Suggest career and family for men	-	-	-	-	-
Suggest career for women, family for men	-.0005	-.0024	-.0081	-.0308	.0417
	(.0007)	(.0039)	(.0128)	(.0512)	(.0679)
Suggest family for women, career for men	.0006	.0030	.0092	.0313	-.0441
	(.0012)	(.0055)	(.0164)	(.0513)	(.0737)
Suggest career and family for women and men	-	-	-	-	-
Career/Family Preference					
Choose career	-.0008	-.0049	-.0175	-.0757	.0989
	(.0008)	(.0034)	(.0117)	(.0585)	(.0710)
Choose family	.0448	.0981	.1568**	.2209***	-.5207***
	(.0561)	(.0905)	(.0798)	.0404	(.2079)
Choose both	-	-	-	-	-

Reasons for joining medicine					
To serve as a doctor and help people	-.0002	-.0011	-.0034	-.0122	.0169
	(.0004)	(.0018)	(.0057)	(.0200)	(.0276)
To earn a comfortable living	-.0000	-.0002	-.0007	-.0025	.0035
	(.0003)	(.0015)	(.0046)	(.0166)	(.0230)
To please parents and loved ones	-.0005	-.0024	-.0075	-.0268	.0371
	(.0005)	(.0020)	(.0055)	(.0185)	(.0253)
To have better marriage prospects	.0007	.0038*	.0121**	.0432***	-.0599***
	(.0007)	(.0022)	(.0056)	(.0173)	(.0223)
I did not want to join the field but was persuaded	.0009	.0049*	.0155**	.0553***	-.0766***
	(.0009)	(.0030)	(.0072)	(.0175)	(.0243)
Motivation Levels					
Interest	.0000	.0001	.0003	.0010	-.0014
	(.0001)	(.0003)	(.0008)	(.0029)	(.0040)
Competence	-.0002	-.0010*	-.0028**	-.0101**	.0140***
	(.0002)	(.0005)	(.0012)	(.0044)	(.0056)
Choice	-.0000	-.0001	-.0004	-.0015	.0020
	(.0001)	(.0004)	(.0011)	(.0040)	(.0055)
Tension	.0000	.0002	.0008	.0028	-.0038
	(.0001)	(.0003)	(.0008)	(.0029)	(.0040)
N					214
Pseudo R^2					0.2357

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.3.4 Preference of moving abroad for career advancement

If women feel the pressure to get married, they are 30 percentage points more likely to have moving abroad for career advancement as their most preferred career outcome (Table 15). They are also less likely to have moving abroad at lower preference levels. Women who choose career over family are less likely to have moving abroad as their 1st, 2nd, 3rd or 4th preference, and they are 32 percentage points more likely to have moving abroad as their first preference. Women who choose family are 45 percentage points more likely to have moving abroad for career advancement as least preferred, and are 39 percentage points less likely to have it as most preferred career outcome. It is also found that women who decide to become doctors to earn a comfortable living, are 5 percentage points more likely to have moving abroad as their highest preferred career outcome.

Table 15 - Dependent variable: Prefer move abroad for career advancement					
	Outcome y = 1 (least preferred)	Outcome y = 2	Outcome y = 3	Outcome y = 4	Outcome y = 5 (most preferred)
Variable	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)
Social Pressure					
Pressure felt by fellows to get married	.06165 (.0509)	.0202 (.0167)	.0357 (.0262)	.0029 (.0059)	-.1205 (.0899)
Pressure felt by fellows to earn a living	.0071 (.0610)	.0025 (.0212)	.0047 (.0390)	.0008 (.0061)	-.0152 (.1273)
Pressure felt to get married	-.0916*** (.0258)	-.0416** (.0174)	-.1015** (.0421)	-.0629 (.0391)	.2976*** (.1090)
Pressure felt to earn a living	.0133 (.0618)	.0046 (.0208)	.0086 (.0377)	.0014 (.0044)	-.0280 (.1244)
Gender-Career Bias					
Suggest career for women	-.0270 (.0334)	-.0100 (.0127)	-.0198 (.0266)	-.0052 (.0092)	.0620 (.0806)
Suggest family for women	-.0617 (.0549)	-.0266 (.0277)	-.0606 (.0742)	-.0302 (.0570)	.1791 (.2106)
Suggest career and family for women	-	-	-	-	-
Suggest career for men	-.0253 (.0372)	-.0093 (.0147)	-.0184 (.0294)	-.0047 (.0095)	.0578 (.0897)
Suggest family for men	.0211 (.0404)	.0073 (.0138)	.0136 (.0249)	.0022 (.0037)	-.0443 (.0818)
Suggest career and family for men	-	-	-	-	-
Suggest career for women, family for men	(.0869) (.0660)	.0260 (.0179)	.0417* (.0228)	-.0031 (.0119)	-.1515 (.0933)
Suggest family for women, career for men	.0547 (.0489)	.0180 (.0158)	.0319 (.0254)	.0028 (.0053)	-.1074 (.0870)
Suggest career and family for women and men	-	-	-	-	-
Career/Family Preference					
Choose career	-.0949*** (.0288)	-.0441** (.0195)	-.1104** (.0517)	-.0735 (.0569)	.3229** (.1423)
Choose family	.4528* (.2629)	.0494** (.0251)	.0054 (.0829)	-.1197 (.0847)	-.3879*** (.0867)
Choose both	-	-	-	-	-

Reasons for joining medicine					
To serve as a doctor and help people	-.0232	-.0083	-.0158	-.0032	.0505
	(.0171)	(.0068)	(.0126)	(.0036)	(.0381)
To earn a comfortable living	-.0245	-.0088	-.0167	-.0034	.0533*
	(.0152)	(.0057)	(.0106)	(.0032)	(.0320)
To please parents and loved ones	.0183	.0066	.0125	.0025	-.0399
	(.0152)	(.0058)	(.0108)	(.0030)	(.0333)
To have better marriage prospects	.0194	.0069	.0132	.0027	-.0422
	(.0127)	(.0049)	(.0090)	.0027	(.0273)
I did not want to join the field but was persuaded	.0094	.0034	.0064	.0013	-.0204
	(.0133)	(.0049)	(.0090)	(.0021)	(.0288)
Motivation Levels					
Interest	-.0006	-.0002	-.0004	-.0001	.0013
	(.0026)	(.0009)	(.0017)	(.0004)	(.0056)
Competence	.0008	.0003	.0005	.0001	-.0016
	(.0036)	(.0013)	(.0024)	(.0005)	(.0077)
Choice	.0024	.00086	.0016	.0003	-.0052
	(.0035)	(.0013)	(.0023)	(.0005)	(.0075)
Tension	-.0034	-.0012	-.0023	-.0005	.0075
	(.0027)	.0010)	(.0018)	(.0005)	(.0057)
N					214
Pseudo R^2					0.1188

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.3.5 Preference of switching to another profession

In the regression results shown in Table 16, preference to switch to a field other than medicine is the dependent variable. It is found that women who face pressure to get married are less likely to prefer to switch careers to something other than medicine[25]. Women who choose family are more likely to have switching to another field as their 3rd or 4th preferred career outcome. These outcomes are unclear, partly because there is no information on alternate career choices and influencing factors in my model[26]. A useful outcome is that women who decided to become doctors because they were persuaded by others are more likely to want to switch to another field.

[25] Only the marginal effect for the 5th outcome is significant, but the signs of 2nd, 3rd and 4th outcomes are also negative.

[26] Fields other than medicine are also not in the realm of my analysis.

Table 16 - Dependent variable: Prefer switch to a field other than medicine					
	Outcome y = 1 (least preferred)	Outcome y = 2	Outcome y = 3	Outcome y = 4	Outcome y = 5 (most preferred)
Variable	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)
Social Pressure					
Pressure felt by fellows to get married	.0540	-.0143	-.0142	-.0139	-.0115
	(.0688)	(.0193)	(.0179)	(.0175)	(.0152)
Pressure felt by fellows to earn a living	.0108	-.0028	-.0028	-.0028	-.0024
	(.1085)	(.0284)	(.0285)	(.0281)	(.0235)
Pressure felt to get married	.1340	-.0404	-.0366	-.0328	-.0242*
	(.0870)	(.0328)	(.0243)	(.0218)	(.0142)
Pressure felt to earn a living	-.1623	.0336*	.03907	.0441	.0456
	(.1158)	(.0194)	(.0271)	(.0335)	(.0424)
Gender-Career Bias					
Suggest career for women	-.1131	.0262	.0284	.0301	.0283
	(.0822)	(.0174)	(.0216)	(.0237)	(.0239)
Suggest family for women	-.3274	.0447***	.0662**	.0904	.1262
	(.2115)	(.0131)	(.0327)	(.0594)	(.1276)
Suggest career and family for women	-	-	-	-	-
Suggest career for men	-.1155	.0268	.0291	.0308	.0289
	(.0871)	(.0185)	(.0227)	(.0254)	(.0248)
Suggest family for men	-.0576	.0141	.0148	.0152	.0136
	(.0802)	(.0183)	(.0208)	(.0224)	(.0200)
Suggest career and family for men	-	-	-	-	-
Suggest career for women, family for men	.0896	-.0253	-.0241	-.0226	-.0177
	(.0693)	(.0213)	(.0200)	(.0180)	(.0134)
Suggest family for women, career for men	.0536	-.0142	-.0141	-.0138	-.0114
	(.0753)	(.0213)	(.0208)	(.0192)	(.0152)
Suggest career and family for women and men	-	-	-	-	-
Career/Family Preference					
Choose career	.0263	-.0070	-.0069	-.0068	-.0056
	(.1244)	(.0340)	(.0332)	(.0319)	(.0255)
Choose family	.0951	-.0279	-.0258	-.0236	-.0178
	(.1566)	(.0524)	(.0445)	(.0373)	(.0241)
Choose both	-	-	-	-	-

Reasons for joining medicine					
To serve as a doctor and help people	.0180	-.0046	-.0047	-.0047	-.0040
	(.0317)	.0082	(.0083)	(.0083)	(.0073)
To earn a comfortable living	.0100	-.0026	-.0026	-.0026	-.0022
	(.0286)	(.0073)	(.0074)	(.0076)	(.0064)
To please parents and loved ones	.0377	-.0096	-.0098	-.0098	-.0084
	(.0291)	(.0077)	(.0082)	(.0079)	(.0067)
To have better marriage prospects	.0037	-.0009	-.0010	-.0010	-.0008
	(.0251)	(.0064)	(.0065)	(.0065)	(.0056)
I did not want to join the field but was persuaded	-.0610**	.0157**	.0159**	.0159*	.0136**
	(.0274)	(.0080)	(.0080)	(.0082)	(.0070)
Motivation Levels					
Interest	-.0027	.0007	.0007	.0007	.0006
	(.0047)	(.0012)	(.0012)	(.0012)	(.0011)
Competence	.0068	-.0017	-.0018	-.0018	-.0015
	(.0064)	(.0016)	(.0017)	(.0017)	(.0016)
Choice	.0056	-.0014	-.0014	-.0014	-.0012
	(.0061)	(.0015)	(.0017)	(.0017)	(.0014)
Tension	-.0095*	.0024*	.0025*	.0025*	.0021*
	(.0051)	(.0014)	(.0014)	(.0015)	(.0013)
N					213
Pseudo R^2					0.1265

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.3.6 Preference of getting married, career is secondary

The results of the regression with dependent variable as preference of getting married (career is secondary) are given in Table 17. Interestingly, pressure faced by respondents and their fellows of the same gender to get married does not have a significant clear effect on preference to get married after house job. Women who suggest career to other women are less likely to aspire toward getting married and considering that career is secondary. Women who choose family over career are 19 percentage points more likely to have getting married as a mid-level preference. It is also found that women who decide to become doctors either to improve marriage prospects or due to others' persuasion are more likely to aspire toward getting married and considering career as secondary, although the magnitudes of the effects are small.

Table 17 - Dependent variable: Prefer to get married, career is secondary					
	Outcome y = 1 (least preferred)	Outcome y = 2	Outcome y = 3	Outcome y = 4	Outcome y = 5 (most preferred)
Variable	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)	dy/dx (Std. error)
Social Pressure					
Pressure felt by fellows to get married	.0492	-.0206	-.0191	-.0059	-.0036
	(.0859)	(.0369)	(.0333)	(.0102)	(.0062)
Pressure felt by fellows to earn a living	-.2248*	.0667***	.0935*	.0365	.0281
	(.1243)	(.0267)	(.0550)	(.0289)	(.0241)
Pressure felt to get married	-.0120	.0048	.0047	.0015	.0009
	(.1365)	(.0539)	(.0541)	(.0175)	(.0111)
Pressure felt to earn a living	.0871	-.0386	-.0331	-.0097	-.0057
	(.1119)	(.0539)	(.0417)	(.0119)	(.0060)
Gender-Career Bias					
Suggest career for women	.1767**	-.0798*	-.0664**	-.0193*	-.0113**
	(.0771)	(.0408)	(.0292)	(.0101)	(.0057)
Suggest family for women	-.2264	.0613**	.0950	.0389	.0312
	(.1655)	(.0255)	(.0745)	(.0373)	(.0373)
Suggest career and family for women	-	-	-	-	-
Suggest career for men	-.0715	.0276	.0285	.0094	.0060
	(.0863)	(.0321)	(.0357)	(.0117)	(.0081)
Suggest family for men	.0155	-.0064	-.0061	-.0019	-.0012
	(.0881)	(.0364)	(.0345)	(.0108)	(.0065)
Suggest career and family for men	-	-	-	-	-
Suggest career for women, family for men	-.0234	.0093	.0092	.0030	.0019
	(.1155)	(.0447)	(.0459)	(.0151)	(.0099)
Suggest family for women, career for men	-.0951	.0360	.0381	.0127	.0083
	(.0915)	(.0324)	(.0378)	(.0138)	(.0098)
Suggest career and family for women and men	-	-	-	-	-
Career/Family Preference					
Choose career	.1371	-.0646	-.0506	-.0141	-.0079
	(.1135)	(.0607)	(.0397)	(.0111)	(.0059)
Choose family	-.5011***	.0159	.1898***	.1253	.1701
	(.1603)	(.0961)	(.0418)	(.0819)	(.1680)
Choose both	-	-	-	-	-

Reasons for joining medicine					
To serve as a doctor and help people	.0613 (.0388)	-.0249 (.0171)	-.0241 (.0154)	-.0076 (.0051)	-.0047 (.0034)
To earn a comfortable living	.0008 (.0309)	-.0003 (.0126)	-.0003 (.0121)	-.0001 (.0038)	-.0001 (.0024)
To please parents and loved ones	-.0446 (.0351)	.0181 (.0148)	.0175 (.0143)	.0055 (.0044)	.0034 (.0029)
To have better marriage prospects	-.0598** (.0299)	.0243** (.0125)	.0235* (.0124)	.0074* (.0045)	.0046 (.0030)
I did not want to join the field but was persuaded	-.0962*** (.0322)	.0391*** (.0148)	.0378*** (.0143)	.0119** (.0055)	.0074** (.0037)
Motivation Levels					
Interest	.0005 (.0054)	-.0002 (.0022)	-.0002 (.0021)	-.0001 (.0007)	-.0000 (.0004)
Competence	-.0072 (.0073)	.0029 (.0030)	.0028 (.0030)	.0009 (.0010)	.0006 (.0005)
Choice	.0074 (.0082)	-.0030 (.0033)	-.0029 (.0032)	-.0009 (.0011)	-.0006 (.0007)
Tension	.0023 (.0053)	-.0010 (.0022)	-.0009 (.0021)	-.0003 (.0007)	-.0002 (.0004)
N					214
Pseudo R^2					0.1964

Notes: *, **, *** significant at 10, 5, 1 percent, respectively.

5.3.7 Discussion

It is difficult to draw generalized conclusions from Model 3 because the nature of the preferences is different. Some preferences are in favour of career (preferences to specialise and/or move abroad for career progression), some are somewhat against career progression (preferences to not work, not specialise and/or get married), while one is specifically against a career in medicine (switch to a field other than medicine).

> Hypothesis 8: women align their career preferences with the social pressure they face

Even though, the findings for social pressure felt by others are contradictory[27], there is evidence that women have aspirations that sometimes go against the pressure they personally feel[28]. This is found for the preferences of moving abroad for career advancement and for not specialising. If women feel the pressure to get married, they are more likely to prefer to move abroad, and they are less likely to prefer not to specialise. If they feel the pressure to earn, they are more likely to not specialise, thus reducing their short-term and long term earnings. This is an interesting finding as it may capture that the social pressure felt by women may serve the opposite effect than what is intended: if women are pushed toward career, they may have less desire for it, if they are pushed toward family, they may have less aspiration toward it. This phenomenon is supported by the concept of reactance in psychology. As Steindl et al. (2015) put it, "Reactance is an unpleasant motivational arousal that emerges when people experience a threat to or loss of their free behaviours. It serves as a motivator to restore one's freedom" (p. 205). Another interesting finding is that pressure faced by female respondents and fellows of

[27] Findings for pressure felt by fellows to get married are contradictory for preferring not to specialize and to specialize.

[28] There is no indication in my data about the extent to which this reverse reaction translates into action. It may just be that they prefer the opposite, but they end up doing what is in line with social pressure.

the same gender to get married does not have a significant effect on preference to get married after house job. This shows that social pressure may not actually change what women aspire towards. Hence, I have found evidence contrary to Hypothesis 8, as women who face pressure to get married may be more likely to prefer career progression, while women who face pressure to earn may be less likely to do so; women in the sample may not align their preferences with social pressure.

> Hypothesis 9: women who choose career over family, have high preference for career development[29]

One trend is evident that women who choose family over career regardless of monetary considerations are more likely to prefer specialisation and moving abroad. Women who choose family over career are more likely to prefer getting married, not working and/or not specialising. This may be because women who have the intrinsic desire to establish a career may be more willing to put in the effort to specialise, or move abroad for more training and work opportunities, rather than women who prefer family. This shows that personal choice (regardless of financial constraints) and aspirations are in line in this sample. Therefore, in relation to Hypothesis 9, evidence has been found that supports that women who choose career prefer specialisation and/or moving abroad for career advancement.

> Hypothesis 10: women who decided to become doctors because they were persuaded by others, or to improve marriage prospects, have low preference for career development[30]

Another trend may be that initial reasons for joining this profession may have implications for the future career decisions as well. As improving marriage prospects becomes an important factor for becoming a doctor, one is more likely to prefer not to work or specialise, and also more likely to prefer getting married as career is secondary. As persuasion by others becomes an important reason for enrolling in medical college, they are more likely to prefer not to work or specialise, switch to another profession and/or get married as career is secondary. This shows that if women did not decide to join the profession due to characteristics of the profession itself, but did so due to external forces and peripheral issues, they are more likely to prefer not to work after house job. This reiterates the findings from Model 2, that if a challenging profession is joined due to peripheral factors, it will have long-term implications on women's agency and aspirations. Similarly, it is also found that women who decide to become doctors to earn a comfortable living, are 5 percentage points more likely to have moving abroad as their highest preferred career outcome. Therefore, evidence for Hypothesis 10 is found as women who decided to become doctors because they were persuaded by others, or to improve marriage prospects are found not to aspire towards career progression.

> Hypothesis 11: women who are more motivated have high preference for career development

Motivation levels are not found to have significant effects on women's aspirations for most of the regressions, except for preference to specialise. As women's sense of competence increases, they are more likely to have specialisation as their top preference, and less likely to have it as a lower preference. Therefore, women may be aware that specialising is a long, tedious and competitive process, and those who are more confident

[29] High preference means aspiring toward specialization or moving abroad
[30] Low preference means preferring not to specialize or work, and to get married as career is secondary

in their abilities as medical professionals are more likely to prefer to specialise. However, this indication is not enough to make any claims about Hypothesis 11.

Chapter 6: Conclusion

In this paper, I employ experimental and quantitative evidence collected from students and early career doctors from private medical institutions in Rawalpindi and Islamabad, Pakistan. The data is collected from 1st year students, 5th (final) year students and recent graduates to explore if there are differences between women and men at the three career levels. The paper also studies some factors that may explain women's perception of agency relative to career outcomes and their career aspirations. Firstly, I conduct a qualitative survey to understand the problem in more detail and to help design the quantitative survey. A literature review is also conducted on similar and related studies; the existing literature is found to be somewhat fragmented, as the quantitative and qualitative studies do not seem complementary and should be more integrated. Considering the qualitative and quantitative studies and findings from the qualitative survey, the variables and models of interest are developed. In addition, eleven hypothesis are specified; three empirical models are set up to test these hypotheses and also study the dynamics in detail. Table 18 gives a summary of the findings discussed in detail in Chapter 5.

In order to answer the main research question as to why women in medicine make different labour market decisions than men in Pakistan, I consult the findings for the 11 main research hypothesis found in chapter 5. In the first model we find that there is no actual innate difference in career orientation towards medicine between men and women but the important difference is the social pressures that they go through: more often, men are encouraged to work and prioritise their career while women are encouraged to prioritise their family life. This is interesting for the main research question as it may imply that the reason why men and women make different career decisions could be because of the social pressure and the gender norms that are prevalent in society. Model 2 raises the issue of the sense of agency that women in medicine have. Women from households that are more affluent but have fewer household members are more likely to have lower sense of agency. It is also found that women who face social pressures are less likely to perceive agency gaps. Another interesting finding is that in households where there is a degree of maternalistic control of power, women are more likely to have a greater sense of agency. If women decided to join the profession because of someone else's persuasion, they are more likely to have lower sense of agency. If they have lower levels of motivation towards the career they may also have lower sense of agency. This means that women's sense of agency, when it comes to their career decisions, may be positively influenced by smaller household sizes, social pressure that they face, a degree of maternalistic control on household decision-making and lower levels of mental tension. The factors that affect women's preferences of career outcomes may also explain the different career decisions that they make. Women who directly face social pressure to get married may be more likely to aspire towards career progression, while women who face social pressure to earn a living may be more likely to aspire otherwise. This implies that pressuring women into making certain life decisions may not directly translate into the intended outcomes. Another finding is that women who prefer career over family regardless of financial considerations are more likely to opt for specialising or going abroad for career advancement. This may highlight the role of personal preferences of women; if women aspire towards a career more than family, they will try to fulfil their aspirations. On the other hand if women are more interested in family, they will follow their preferences. In

such cases there may be little that short-term policy interventions can/should change. Another important aspect of career decisions made by women in medicine is that women who are persuaded to join the field and did not initially want to do so may be less likely to aspire towards career progression after becoming doctors. This reiterates the importance of enabling women to independently make their career choices rather than coercing them towards a certain profession.

When reading Table 18, one convenient conclusion that may be made is that women face more pressure to get married, if they face this pressure, they have higher expectations of fulfilling their aspirations, and that they aspire toward career progression as they oppose social pressure. With this argument, more women would be practicing medicine and specialising. Such a method of interpreting the findings may be problematic as it makes many generalisations: firstly, the correlations summarised in Table 18 are only significant for some of the possible career outcomes, and secondly, I do not have information on the actual career outcomes, I only know the expected career outcomes. It is, therefore, vital to study the findings in Chapter 5 and Appendix A in detail to understand the dynamics. Nonetheless, there is need for more detailed research on this angle.

It must be reemphasized that this paper highlights the nuances of career decisions made by women in medicine in some private institutions of Pakistan; it does not claim causality or external validity. The findings are also only specific to the time period under investigation. As gender norms, agency, career aspirations and labour market dynamics can be evolving phenomenon, the findings of this paper may not say much about the target population in the past or future. In addition, several limitations of the paper should be kept in mind when understanding the results. Firstly, the number of male respondents in the graduates' cohort is only 10, so the validity of findings in Chapter 5.1.3 may be questionable. Secondly, it must be remembered that the data comes from private medical institutions so the findings are not applicable to public institutions. Future research may combine both private and public institutions to have more variation in the sample, and should include representative samples from all cohorts. The third limitation is the issue of social desirability bias in survey responses. During data collection, it was not specified to the respondents that the study takes a gendered approach, however, due to the nature of the questions, some respondents may have guessed and given answers that reflect gender parity. I have found many trends that reflect gender differences, so, social desirability bias may not have been a recurring issue. The fourth limitation is that some socioeconomic controls could not be used due to a large number of missing values: many respondents did not know how much land their households owned, or the hours of paid and unpaid work they did. This meant that these socioeconomic characteristics could not be used in models 2 and 3 without compromising on the number of observations of the sample. The fifth limitation is that this study does not consider the safety situation faced by doctors in Pakistan. The issue of poor safety conditions is repeatedly raised by students and doctors, especially females, and in the media (Baig, 2018; Qureshi, 2018; Shabbir, 2018), but data on safety perceptions and its effect on career decisions was not collected. It is recommended that future studies take these limitations into consideration when designing and implementing an empirical analysis. This paper has also found some interesting correlations that should be investigated further. The issue of reactance and maternalistic control in household decision-making can be tested in various different contexts to add to the literature.

Table 18: Summary of Findings	
Hypotheses	**Findings**
Model 1	
Hypothesis 1: women face greater social pressure than men to prioritize family life, while men are socially pressured toward career	Men at all three career levels face more social pressure to earn a living; women in 5th year and graduates face more pressure to get married.
Hypothesis 2: men are intrinsically more career oriented than women	Motivation levels at the three career levels are similar for females and males; gender-career perceptions are mixed and do not show that one gender is more oriented toward career than another
Model 2	
Hypothesis 3: women from affluent households with small number of household members have a higher sense of agency over career decisions	Women from more affluent households have lower sense of agency; women from fewer-member households have higher sense of agency.
Hypothesis 4: women who face social pressure have a lower sense of agency over career decisions	For career outcomes of not working, not specializing and specializing, women who face social pressures are less likely to perceive agency gaps
Hypothesis 5: women from households where some decisions are made either by the husband/father or the wife/mother have lower sense of agency over career decisions	A degree of paternalistic decision-making in the household may reduce women's sense of agency, while a maternalistic control on decision-making increases women's sense of agency.
Hypothesis 6: women who decided to become doctors due to others' persuasion or to improve marriage prospects have a lower sense of agency over career decisions	If women's decision to become a doctor is due to someone else's persuasion their aspirations and expectations seem to be less aligned, leading to lower sense of agency.
Hypothesis 7: women who are more motivated have a higher sense of agency over career decisions	With lower levels of motivation and higher mental tension due to medical career, sense of agency may decrease.
Model 3	
Hypothesis 8: women align their career preferences with the social pressure they face	Women who face pressure to get married are more likely to prefer career progression, while women who face pressure to earn are less likely to do so; women in the sample may not align their preferences with social pressure.
Hypothesis 9: women who choose career over family, have high preference for career development	Women who choose career prefer specialization and/or moving abroad for career advancement.
Hypothesis 10: women who decided to become doctors because they were persuaded by others, or to improve marriage prospects, have low preference for career development	Women who decided to become doctors because they were persuaded by others, or to improve marriage prospects may not aspire towards career progression.
Hypothesis 11: women who are more motivated have high preference for career development	Women who are more confident in their abilities as medical professionals are more likely to prefer to specialize; this may not be enough to make claims about Hypothesis 11.

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Appendix A0: Descriptions of Variables

Summary of Descriptions of Variables		
Variable	**Definition**	**Units**
Model 1		
Explanatory Variables		
Motivation Levels	Self-reported levels of interest, competence, choice and tension, measured by Intrinsic Motivation Theory instrument	Score on Intrinsic Motivation Theory instrument
Social Support	Information about people who influence respondent's career decisions and the emotions they elicit; sources of emotions can be relatives, friends, colleagues, acquaintances or others; emotions can be fear, joy, disgust, surprise, trust, anticipation	1 if specific emotion is felt due to person of specific category, 0 if not
Social Pressure	Asks if respondents or fellows of their gender face pressure by society to get married or earn a living	1 if pressure felt, 0 is not
Gender career bias		
Females: career or family	Measures if respondents suggest career, family or both to women in a specific career/family situation; measured by vignettes	0 if career is suggested for women, 1 if career and family are suggested, 2 if family is suggested
Males: career or family	Measures if respondents suggest career, family or both to men in a specific career/family situations; measured by vignettes	0 if career is suggested for men, 1 if career and family are suggested, 2 if family is suggested
Female & Males: Career or family	Measures if respondents suggest career, family or both to women and men in specific career/family situations; measured by vignettes	0 if family is suggested for women and career for men, 1 if both are suggested for women and men, 2 if career is suggested for women and family for men
Implicit Association Test	measures the time taken to associate women and men with family and career to gauge bias in associations between gender and career	0 if no auto association, 1 if slight auto association, 2 if moderate auto association, 3 if strong auto

		association, 4 if other auto association
Career or Family Preference		
Personal preference: career or family	Whether one would choose career, family or both in the absence of financial constraints	0 if career, 1 if both, 2 if family
Model 2		
Dependent Variable: Gap between aspirations and expectations	Measures if women perceive a gap between their career aspirations a expectations	0 if aspirations and expectations are in line, 1 if gap between aspirations and expectations
Not work	If there is a gap between aspirations and expectations in this career outcome	0 if no gap, 1 if gap
Work in medicine but not specialize	If there is a gap between aspirations and expectations in this career outcome	0 if no gap, 1 if gap
Specialize	If there is a gap between aspirations and expectations in this career outcome	0 if no gap, 1 if gap
Move abroad for career advancement	If there is a gap between aspirations and expectations in this career outcome	0 if no gap, 1 if gap
Switch to a field other than medicine	If there is a gap between aspirations and expectations in this career outcome	0 if no gap, 1 if gap
Get married; career is secondary	If there is a gap between aspirations and expectations in this career outcome	0 if no gap, 1 if gap
Explanatory variables		
Socioeconomic Characteristics		
Age	Age of respondent	Years
Marital status	Marital status of respondent	0 for single, 1 for engaged, 2 for married, 3 for separated, 4 for divorced and 5 for other
Health	Has the respondent suffered health issues in the past 6 months	0 if no health, 1 if health issues suffered
Rooms in house	Total number of rooms in the household	Number of rooms
Number of household members	Number of household members	Number of household members
Non-earning members of the household	Number of on-earning members of the household	Number of on-earning members of the household
Household income	Annual income of the household	0 if 0 to 960,000 PKR, 1 if 960,000 to 1,444,000 PKR, 2 if 1,444,000 to 1,920,000 PKR, 3 if

		1,920,000 to 2,400,000 PKR and 4 if 2,400,000 PKR and above
Housing status	Whether the respondent's household owns, rents the house or lives rent free.	0 if owned, 1 if rented, 2 is rent free
Gender of the household head	Gender of the household head	0 if female, 1 if male, 2 if other
Household gender dynamics		
Some household decisions made by both husband and wife	If any of the household decisions (general household finances, decisions related to marriage of children/other family members, decisions relating to entertainment, electoral decisions, employment of children/relatives, and number of children) are made by wife and husband	0 if none, 1 if any
Some household decisions made by husband	If any of the household decisions (general household finances, decisions related to marriage of children/other family members, decisions relating to entertainment, electoral decisions, employment of children/relatives, and number of children) are made by husband	0 if none, 1 if any
Some household decisions made by wife	If any of the household decisions (general household finances, decisions related to marriage of children/other family members, decisions relating to entertainment, electoral decisions, employment of children/relatives, and number of children) are made by wife	0 if none, 1 if any
Some household decisions made by other	If any of the household decisions (general household finances, decisions related to marriage of children/other family members, decisions relating to entertainment, electoral decisions, employment of children/relatives, and number of children) are made by others	0 if none, 1 if any
Reasons for joining medicine		
To serve as a doctor and help people	Reason for joining medical college rated from 1 (least important) to 5 (most important)	1 if least important, 2, 3, 4, 5 if most important)
To earn a comfortable living	Reason for joining medical college rated from 1 (least important) to 5 (most important)	1 if least important, 2, 3, 4, 5 if most important)
To please parents and loved ones	Reason for joining medical college rated from 1 (least important) to 5 (most important)	1 if least important, 2, 3, 4, 5 if most important)

To have better marriage prospects	Reason for joining medical college rated from 1 (least important) to 5 (most important)	1 if least important, 2, 3, 4, 5 if most important)
I did not want to join this field but was persuaded	Reason for joining medical college rated from 1 (least important) to 5 (most important)	1 if least important, 2, 3, 4, 5 if most important)
Model 3		
Dependent Variable: Career preferences after house job	Measures if women aspire toward a career outcome	
Not work	Career outcome rated from 1 (least preferred) to 5 (most preferred)	1 if least preferred, 2, 3, 4, 5 if most preferred)
Work in medicine but not specialize	Career outcome rated from 1 (least preferred) to 5 (most preferred)	1 if least preferred, 2, 3, 4, 5 if most preferred)
Specialize	Career outcome rated from 1 (least preferred) to 5 (most preferred)	1 if least preferred, 2, 3, 4, 5 if most preferred)
Move abroad for career advancement	Career outcome rated from 1 (least preferred) to 5 (most preferred)	1 if least preferred, 2, 3, 4, 5 if most preferred)
Switch to a field other than medicine	Career outcome rated from 1 (least preferred) to 5 (most preferred)	1 if least preferred, 2, 3, 4, 5 if most preferred)
Get married; career is secondary	Career outcome rated from 1 (least preferred) to 5 (most preferred)	1 if least preferred, 2, 3, 4, 5 if most preferred)
Gender-Career Bias		
Suggest career for women	Dummy variables made for gender-career bias; if respondents suggest career for women	0 if no, 1 if yes
Suggest family for women	Dummy variables made for gender-career bias; if respondents suggest family for women	0 if no, 1 if yes
Suggest career for men	Dummy variables made for gender-career bias; if respondents suggest career for men	0 if no, 1 if yes
Suggest family for men	Dummy variables made for gender-career bias; if respondents suggest family for men	0 if no, 1 if yes
Suggest career for women, family for men	Dummy variables made for gender-career bias; if respondents suggest career for women and family for men	0 if no, 1 if yes
Suggest family for women, career for men	Dummy variables made for gender-career bias; if respondents suggest career for men and family for women	0 if no, 1 if yes
Career/Family Preference		

Choose career	Dummy variable made for career or family preference; if respondents choose career over family	0 if no, 1 if yes
Choose family	Dummy variable made for career or family preference; if respondents choose family over career	0 if no, 1 if yes
Choose both	Dummy variable made for career or family preference; if respondents choose career and family	0 if no, 1 if yes

Appendix A1: Model 1

Table 1: Test comparisons for Female at 3 Career Levels

In this section I study the changes in motivation levels, social support, social pressures, gender-career bias and personal preference for women between (1) 1st and 5th year students, and (2) 5th year students and graduates (Appendix A1 Table 1).

Motivation levels are similar across career levels, except for the greater sense of choice for female graduates. For social support, fear from relatives decreases from 1st to 5th year students, and stays about the same for graduates. Joy from relatives increases for female graduates, while sense of surprise from relatives decreases in 5th year but increases again for graduates. Trust toward relatives increases for graduates, and anticipation from relatives increases for female graduates. Fear and disgust from friends increases in 5th year of medical college. Trust toward friends increases for graduates. Joy from colleagues decreases in 5th year but increases again for graduates, and disgust from colleagues increases in 5th year as well. Trust toward colleagues increases in 5th year. Joy from acquaintances increases in 5th year.

When comparing women at the three career levels, I also find that pressure felt by fellows to get married increases for females in 5th year and graduates. Pressure felt by fellows to earn a living increases for 5th year students and decreases again for graduates. On the other hand, pressure felt directly by respondents to get married increases for 5th year students, while pressure to earn a living is low for females and doesn't change for the three cohorts.

Some of the gender-career perceptions change for female graduates. Female graduates more frequently suggest career for men than females of other cohorts. Female graduates also suggest both family and career for women and men much more frequently than females of other career levels. Personal preference between career and family changes in 5th year, as females in 5th year and graduates choose career less frequently than 1st year students. This may indicate a re-examination of priorities done before practically starting work. Gender-career perceptions and social support also change after graduation.

Comparing women at the three career levels shows that women experience a lot of changes before graduation, after almost 5 years in medical college. They face many changes in social support, and also face more pressure toward marriage than before. They are also less likely to choose career for themselves over family.

Table 1: Test comparisons for Female at 3 Career Levels - Means (Standard Error)						
	1st Year	**5th Year**	**H_0: $X_1 = X_5$ p-values**	**5th Year**	**Graduates**	**H_0: $X_5 = X_G$ p-values**
Motivation Levels						
Interest	32.12 (.6250)	31.90 (1.119)	0.86	31.90 (1.119)	31.86 (.9812)	0.98
Competence	21.58 (.4120)	21.91 (.7019)	0.68	21.91 (.7019)	22.24 (.6354)	0.73
Choice	22.77 (.4746)	22.28 (.7047)	0.57	22.28 (.7047)	23.91 (.6301)	0.09*
Tension	19.32 (.8972)	18.92 (.4728)	0.67	19.32 (.8972)	18.24 (.8852)	0.40

Table 1: Test comparisons for Female at 3 Career Levels - Means (Standard Error)						
	1st Year	**5th Year**	**H_0: X_1 = X_5 p-values**	**5th Year**	**Graduates**	**H_0: X_5 = X_G p-values**
Social Support						
Fear from relatives	.3158 (.0437)	.1622 (.0614)	0.07*	.1622 (.0614)	.2308 (.0843)	0.50
Fear from friends	.1058 (.0303)	.3056 (.0779)	0.00***	.3056 (.0779)	.1538 (.0722)	0.17
Joy from relatives	.6547 (.0405)	.6 (.0700)	0.49	.6 (.0700)	.775 (.0669)	0.08*
Joy from colleagues	.1905 (.0385)	.0556 (.0387)	0.05*	.0556 (.0387)	.2069 (.0766)	0.07*
Joy from acquaintance	.0396 (.0195)	.1714 (.0646)	0.01***	.1714 (.0646)	.0714 (.0496)	0.24
Disgust from friends	.1442 (.0346)	.2973 (.0762)	0.04**	.2973 (.0762)	.1538 (.0722)	0.19
Disgust from colleagues	.1308 (.0328)	.2564 (.0708)	0.07*	.2564 (.0708)	.1923 (.0788)	0.56
Surprise from relatives	.3964 (.0466)	.1081 (.0518)	0.00***	.1081 (.0518)	.3571 (.0922)	0.02**
Trust from relatives	.6563 (.0421)	.6591 (.0723)	0.97	.6591 (.0723)	.8864 (.0484)	0.01**
Trust from friends	.6452 (.0431)	.7308 (.0621)	0.27	.7308 (.0621)	.55 (.0797)	0.07*
Trust from colleagues	.1048 (.0300)	.2105 (.0670)	0.10	.2105 (.0670)	.1429 (.0673)	0.49
Anticipation from relatives	.5122 (.0453)	.4048 (.0767)	0.23	.4048 (.0767)	.6286 (.0829)	0.05*
Social Pressure						
Pressure felt by fellows to get married	.1209 (.0242)	.2973 (.0535)	0.00***	.2973 (.0535)	.5893 (.0663)	0.00***
Pressure felt by fellows to earn a living	.0989 (.0222)	.2027 (.0471)	0.02**	.2027 (.0471)	.0714 (.0347)	0.04**
Pressure felt to get married	.0608 (.0178)	.1233 (.0387)	0.09*	.1233 .0388	.1207 (.0431)	0.96[31]
Pressure felt to earn a living	.1105 (.0234)	.1370 (.0405)	0.56	.1370 (.0405)	.0690 (.0337)	0.21
Gender-Career Bias						
Females: career or family	.7802 (.0370)	.7838 (.0519)	0.96	.7838 (.0519)	.7458 (.0621)	0.64
Males: career or family	1.067 (.0526)	1.054 (.0900)	0.90	1.054 (.0900)	.7627 (.1063)	0.04**
Female & Males: Career or family	.8571 (.0455)	.7568 (.0741)	0.24	.7568 (.0741)	.9831 (.0662)	0.03**
Implicit Association Test	1.490 (.0846)	1.571 (.1218)	0.61	1.571 (.1218)	1.484 (.1727)	0.68
Career or Family Preference						

[31]Only 47% of females are single

Table 1: Test comparisons for Female at 3 Career Levels - Means (Standard Error)						
	1st Year	**5th Year**	**H_0: X_1 = X_5 p-values**	**5th Year**	**Graduates**	**H_0: X_5 = X_G p-values**
Personal preference: career or family	.9505 (.0262)	1.014 (.0304)	0.17	1.014 (.0304)	1.034 (.0416)	0.69
Number of observations	**182**	**74**		**74**	**60**	

*Notes: *, **, *** significant at 10, 5, 1 percent, respectively.*

Table 2: T-Test Comparisons for Reasons for joining field of medicine

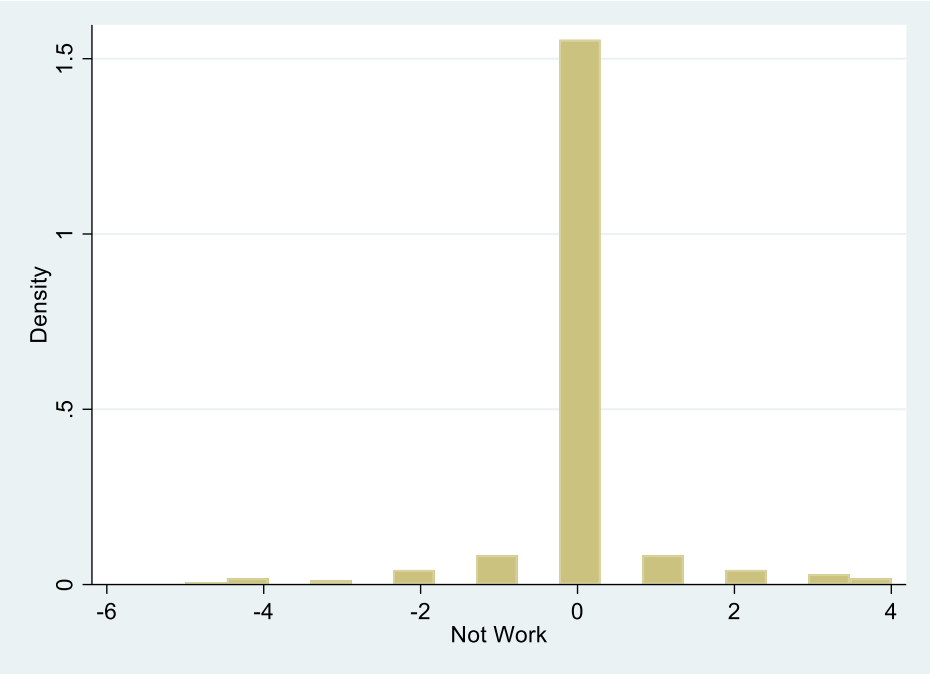
I now discuss T-Test comparisons for reasons for joining medicine for females and males, combined for all three career levels (Table 2). There is a difference between women and men when initial reasons for joining the field are considered. Earning a comfortable living is a much more important reason for men becoming doctors than women. The findings for marriage prospects are interesting, as it is more important for men than women. Even if the findings for marriage prospects for female respondents have social desirability bias, it is clear that having better marriage prospects is a more important factor for male doctors than is commonly perceived. In addition, men in the sample were more likely to be persuaded to join medicine than women.

I ran t-tests to study the differences in initial reasons for joining medicine, combined for all three career levels. It is found that earning a comfortable living is a more important reason for men becoming doctors than women, thus, showing evidence of gender norms and, perhaps, the possibility of social pressure on men to earn prior to them joining medical college. It is also evident that men in the sample were more likely to be persuaded to join medicine than women.

Table 2: T-Test Comparisons for Reasons for joining field of medicine - Means (Standard Error)				
	Total	**Female**	**Male**	**H_0: X_F = X_M p-values**
To serve as a doctor and help people	4.301 (.0502)	4.310 (.0630)	4.283 (.0832)	0.80
To earn a comfortable living	3.714 (.0557)	3.541 (.0716)	4.006 (.0839)	0.00***
To please parents and loved ones	3.993 (.0578)	3.955 (.0740)	4.061 (.0925)	0.38
To have better marriage prospects	2.130 (.0665)	1.946 (.0789)	2.447 (.1155)	0.00***
I did not want to join this field but was persuaded	1.925 (.0671)	1.822 (.0804)	2.106 (.1181)	0.04**
Number of observations	**493**	**316**	**177**	

*Notes: *, **, *** significant at 10, 5, 1 percent, respectively.*

Appendix A2: Model 2 Directions of Gaps



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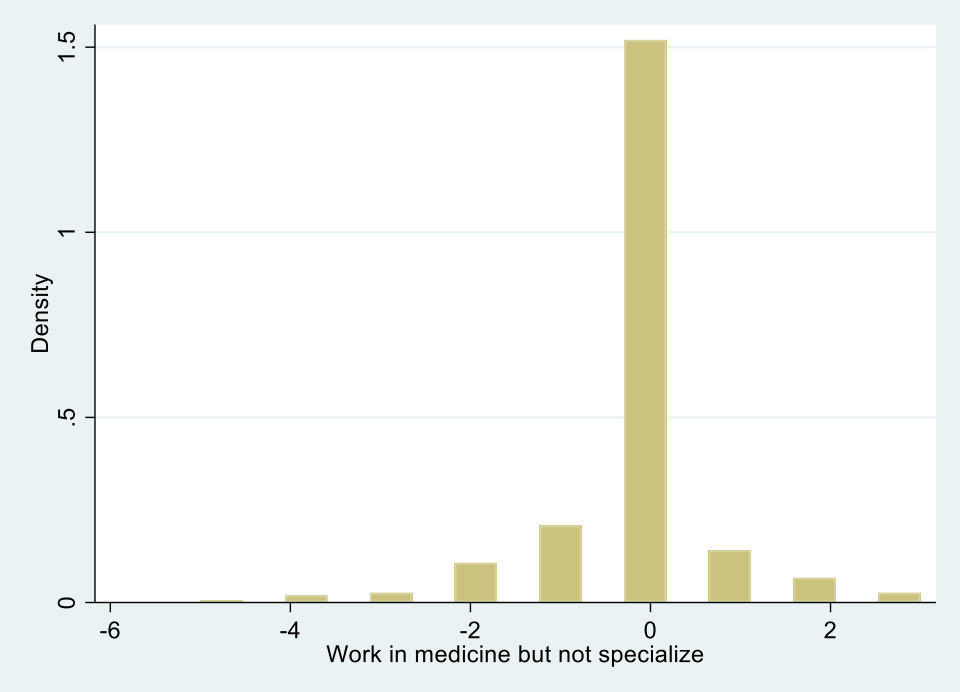

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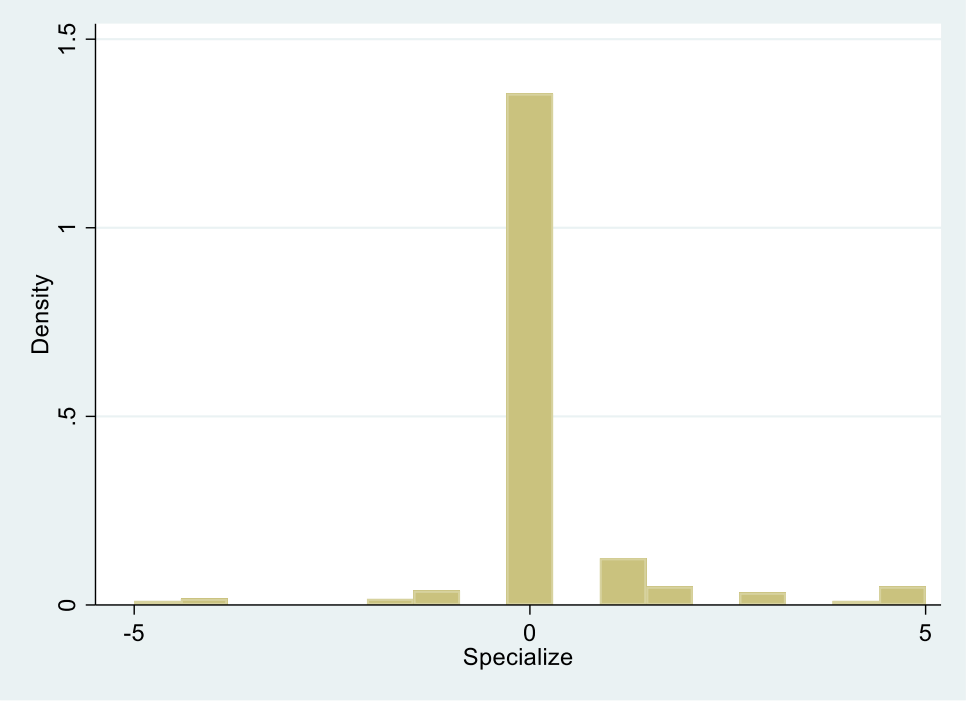

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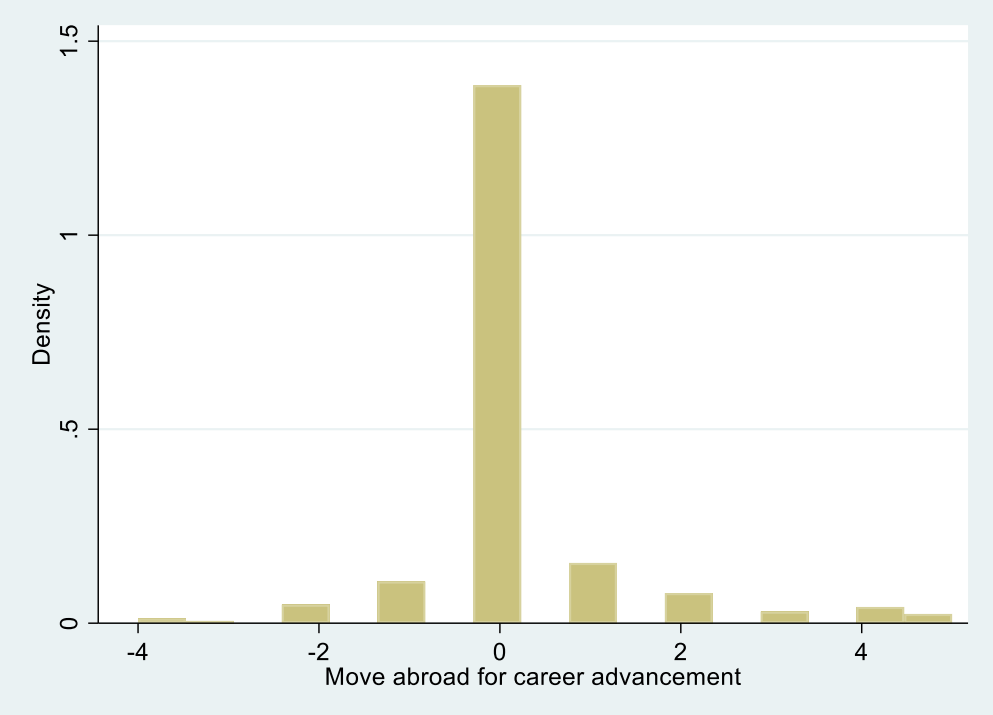

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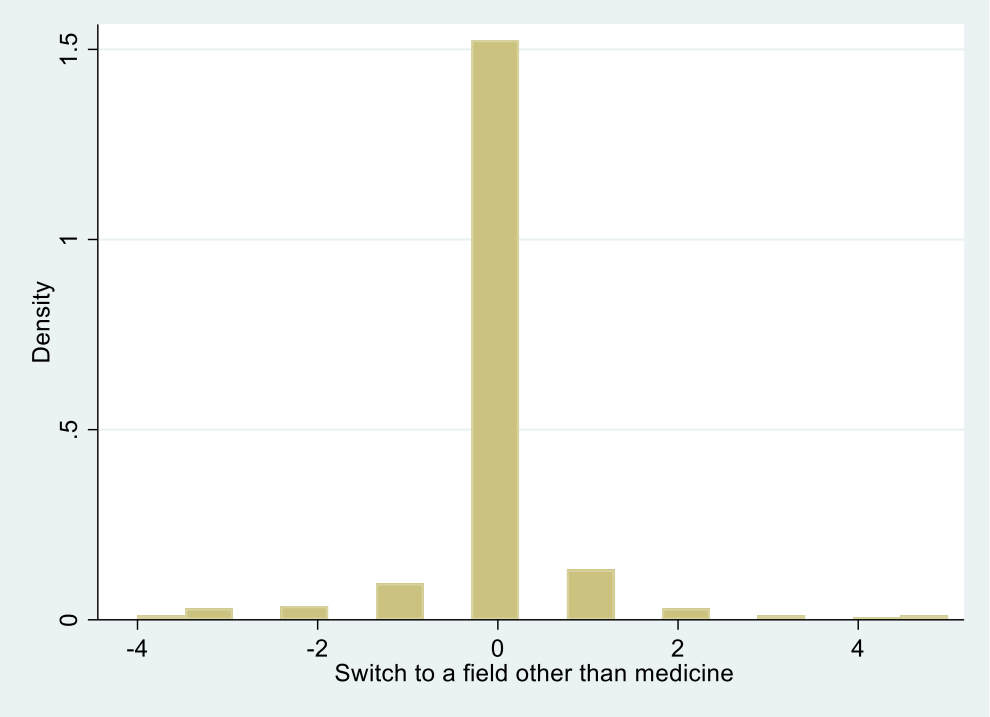

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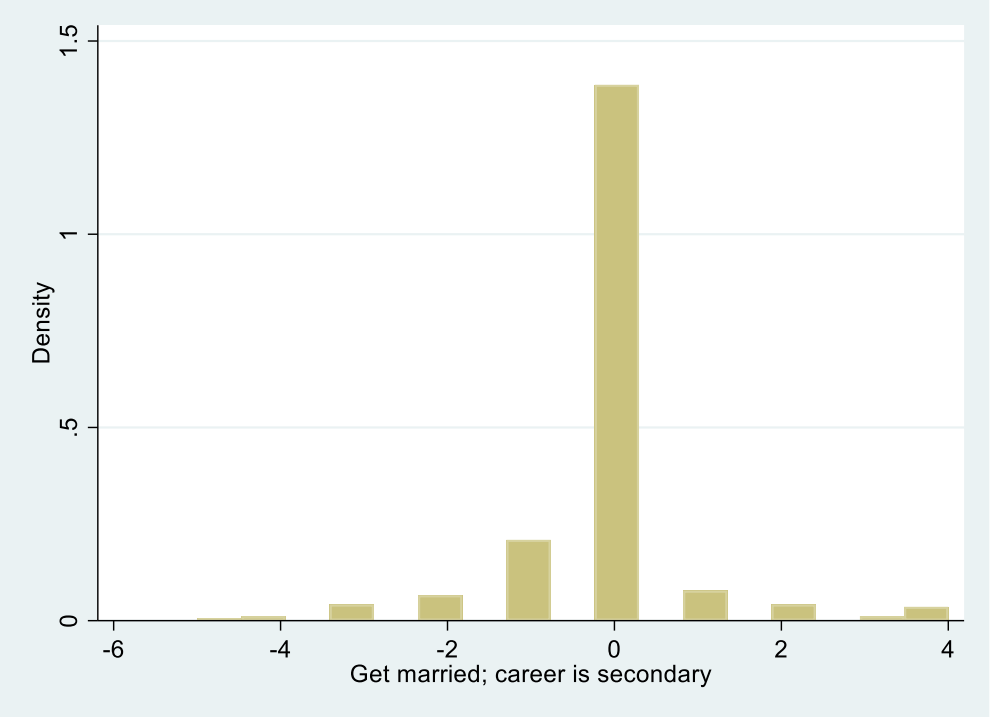

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Appendix B: Quantitative Survey

Labor Market Dynamics of the Field of Medicine: Evidence from Pakistan

Survey Questionnaire

Please consider all aspects of your life (family, friends, studies, work, hobbies etc.) when answering the following questions.

Section 1 – Background

1)	**Respondent ID**	
2)	**University ID**	
3)	**Date**	
4)	**Phone Number**	
5)	**Email Address**	
6)	**Enumerator**	

7)	What is your gender?
	A) Female B) Male C) Other
8)	What is your marital status?
	A) Single B) Married C) Engaged D) Separated E) Divorced F) Other
9)	What is your age in years?
	_____
10)	What is your current education level in MBBS?
	A) 1st year student B) 5th year student C) Recent graduate

11)	What is your year of graduation from medical university/college?
	_____
12)	What was your MCAT score?
	_____
13)	What were your grades in 4th year of MBBS? (in %)
	_____
14)	What were your grades in 5th year of MBBS? (in %)
	_____
15)	What is your average annual household income?
	A) Rs 0 – Rs 960,000 (80,000 per month) B) Rs 960,000 – Rs 1,440,000 (120,000 per month) C) Rs 1,440,000 – Rs 1,920,000 (160,000 per month) D) Rs 1,920,000 – Rs 2,400,000 (200,000 per month) E) Rs 2,400,000 and above
16)	How many hours of weekly paid work do you do?
17)	How many hours of weekly unpaid work do you do?
18)	Have you suffered health problems in last six months?
	A) Minor B) Major C) None
19)	What is your present house occupancy status?
	A) Owned B) Rented C) Rent-free
20)	How many rooms are there in your house? Consider all types of rooms.
21)	How much agricultural and non-agricultural land does your household have?

	A) Acre: _____ B) Kanal: _____ C) Marla: _____ D) No Land: _____
22)	How many people are there in your household?
23)	What is the gender of the household head?
	A) Female B) Male C) Other
24)	How many members of the household are unemployed?
25)	Who takes the following decisions in the household?
	General household finances A) Husband B) Wife C) Both D) Other
	Decisions related to marriage of children/other family members A) Husband B) Wife C) Both D) Other
	Decisions relating to entertainment A) Husband B) Wife C) Both D) Other
	Electoral decisions (who to vote for) A) Husband B) Wife C) Both D) Other
	Employment of children/relatives A) Husband B) Wife C) Both D) Other
	Number of children A) Husband B) Wife

	C) Both D) Other

Section 2 – Situations and Decisions

26)	Fatima is studying for her FCPS Part 1 examination. She worries that her mother-in-law is overworked by domestic chores.
	A) Fatima should continue to study for her exam B) Fatima should find a compromise between studying and doing chores C) Fatima should commit herself to her family responsibilities
27)	Whether or not he works, Ali has enough resources to support his family. His wife is pregnant with their second child. She is taking care of herself and their child. Ali is concerned about their wellbeing.
	A) Ali should focus on his career and provide for his family B) Ali should work part-time and care for his family C) Ali should take leave from work until his wife is better able to care for the family
28)	Asad is a stay-at-home father of three children and his wife is a businesswoman. They are satisfied with this arrangement. Recently, his wife's business is not doing so well. Asad is worried about the household finances.
	A) Asad should work full-time and provide for his family, instead of his wife B) Asad should work part-time to help support the finances C) Asad should enable his wife to focus more on her business to improve earnings
29)	Given that all outcomes are equally financially favorable, you are given a choice between working and caring for home/family. What will you choose?
	A) I will work full-time B) I will equally prioritize work and family care, and divide my time as needed C) I will look-after home/family full-time
30)	Rukhsana and Aleem have three intelligent daughters and no sons. Keeping in mind the Pakistani context, they prefer that all their daughters become doctors so that they have good marriage prospects.
	A) Their daughters will have *better marriage prospects* as doctors than most other professions in Pakistan B) Their daughters will have *the same marriage prospects* as doctors, like most other professions in Pakistan C) Their daughters will have *worse marriage prospects* as doctors than most other professions in Pakistan

Section 3- Societal Factors

31)	Do fellow classmates of your gender face pressure to

	A) Get married B) Earn a living C) Look after household D) None of the above
32)	Do you face pressure to
	A) Get married B) Earn a living C) Look after household D) None of the above

33 (1)	
Consider the career and academic aspects of your life when answering the following questions. Please write the initials of someone who has affected you (positively or negatively). Then, choose how they make you feel in column B. Multiple feelings can be selected. **Column A**	Please, choose emotions in this column. **Column B**[32]
Initials:	Fear: feeling of being afraid
Is this person	Joy: feeling happy
A) A relative	Disgust: feeling something is wrong or nasty
B) A friend	Surprise: being unprepared for something
C) A colleague	Trust: feeling mutual trust
D) An acquaintance E) Other: _____	Anticipation: in the sense of looking forward positively to something which is going to happen.

34 (2)	
Consider the career and academic aspects of your life when answering the following questions. Please write the initials of someone who has affected you (positively or negatively). Then, choose how they make you feel in column B. Multiple feelings can be selected. **Column A**	Please, choose emotions in this column. **Column B**[33]
Initials:	Fear: feeling of being afraid
Is this person	Joy: feeling happy.
A) A relative	Disgust: feeling something is wrong or nasty
B) A friend	Surprise: being unprepared for something
C) A colleague	Trust: feeling mutual trust

[32] Derived from Wheel of Emotions by Robert Plutchik
[33] Derived from Wheel of Emotions by Robert Plutchik

D) An acquaintance E) Other: _____	Anticipation: in the sense of looking forward positively to something which is going to happen.

35 (3)	
Consider the career and academic aspects of your life when answering the following questions. Please write the initials of someone who has affected you (positively or negatively). Then, choose how they make you feel in column B. Multiple feelings can be selected. **Column A**	Please, choose emotions in this column. **Column B**[34]
Initials:	Fear: feeling of being afraid
Is this person	Joy: feeling happy.
A) A relative	Disgust: feeling something is wrong or nasty
B) A friend	Surprise: being unprepared for something
C) A colleague	Trust: feeling mutual trust
D) An acquaintance E) Other	Anticipation: in the sense of looking forward positively to something which is going to happen.

36 (4)	
Consider the career and academic aspects of your life when answering the following questions. Please write the initials of someone who has affected you (positively or negatively). Then, choose how they make you feel in column B. Multiple feelings can be selected. **Column A**	Please, choose emotions in this column. **Column B**[35]
Initials:	Fear: feeling of being afraid
Is this person	Joy: feeling happy.
A) A relative	Disgust: feeling something is wrong or nasty
B) A friend	Surprise: being unprepared for something
C) A colleague	Trust: feeling mutual trust
D) An acquaintance E) Other	Anticipation: in the sense of looking forward positively to something which is going to happen.

37 (5)	
Consider the career and academic aspects of your life when answering the following questions. Please write the initials of someone who has affected you (positively or negatively).	Please, choose emotions in this column. **Column B**[36]

[34] Derived from Wheel of Emotions by Robert Plutchik
[35] Derived from Wheel of Emotions by Robert Plutchik
[36] Derived from Wheel of Emotions by Robert Plutchik

Then, choose how they make you feel in column B. Multiple feelings can be selected. **Column A**	
Initials:	Fear: feeling of being afraid
Is this person	Joy: feeling happy.
A) A relative	Disgust: feeling something is wrong or nasty
B) A friend	Surprise: being unprepared for something
C) A colleague	Trust: feeling mutual trust
D) An acquaintance E) Other	Anticipation: in the sense of looking forward positively to something which is going to happen.

Section 4– Motivation

Consider your pursuit of a medical career as a task. For each of the following statements, please indicate how true it is for you, using the following scale:

1 2 3 4 5 6 7
not at all true; somewhat true; very true

38) While I was working on the task I was thinking about how much I enjoyed it.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

39) I did not feel at all nervous about doing the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

40) I felt that it was my choice to do the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

41) I think I am pretty good at this task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

42) I found the task very interesting.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

43) I felt tense while doing the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

44) I think I did pretty well at this activity, compared to other students.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

45) Doing the task was fun.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

46) I felt relaxed while doing the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

47) I enjoyed doing the task very much.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

48) I didn't really have a choice about doing the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

49) I am satisfied with my performance at this task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

50) I was anxious while doing the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

51) I thought the task was very boring.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

52) I felt like I was doing what I wanted to do while I was working on the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

53) I felt pretty skilled at this task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

54) I thought the task was very interesting.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

55) I felt pressured while doing the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

56) I felt like I had to do the task.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

57) I would describe the task as very enjoyable.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

58) I did the task because I had no choice.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

59) After working at this task for a while, I felt pretty competent.

	1 not at all true	2	3	4 somewhat true	5	6	7 very true

Section 5 - Aspirations and Expectations

60)	What were the main reasons why you joined medical school? Please rate **1 (as least important) to 5 (as most important)** reason					
	A) To serve as a doctor and help people	1	2	3	4	5
	B) To earn a comfortable living	1	2	3	4	5
	C) To please parents and loved ones	1	2	3	4	5
	D) To have better marriage prospects	1	2	3	4	5
	E) I did not want to join this field but was persuaded	1	2	3	4	5
61)	On a scale of **1 (least preferred) to 5 (most preferred)** rate how much you **prefer** the following scenarios for your career progression after house-job:					
	A) Not work	1	2	3	4	5
	B) Work in medicine but not specialize	1	2	3	4	5
	C) Specialize	1	2	3	4	5
	D) Move abroad for career advancement	1	2	3	4	5
	E) Switch to a field other than medicine	1	2	3	4	5
	F) Get married; career is secondary	1	2	3	4	5
62)	On a scale of **1 (least likely) to 5 (most likely)** rate the **likeliness** of the following scenarios for your career progression after house-job:					
	A) Not work	1	2	3	4	5
	B) Work in medicine but not specialize	1	2	3	4	5
	C) Specialize	1	2	3	4	5
	D) Move abroad for career advancement	1	2	3	4	5
	E) Switch to a field other than medicine	1	2	3	4	5
	F) Get married; career is secondary	1	2	3	4	5

Section 6- IAT

63) Gender and Career Test

A) No automatic association of male with career and female with family
B) Slight automatic association of male with career and female with family
C) Moderate automatic association of male with career and female with family
D) Strong automatic association of male with career and female with family
E) Other: _____

Appendix C: Qualitative Survey Questions

Labour Market Decisions in Medicine by Women and Men in Pakistan- A Retrospective Qualitative Overview

Question 1: Gender

Question 2: Age (years)

Question 3: Name of medical university/college that you graduated from

Question 4: Year of graduation

Question 5: What were your reasons for joining medical university/college?

Question 6: Was it your own decision to join medical university/college? If not, what were the persuading factors?

Question 7: What were the social (family and friends) pressures you faced during your time in medical school?

Question 8: What were the social (family and friends) pressures you faced soon after medical school?

Question 9: Was your experience at medical school different from that of the other gender? How?

Question 10: Did your personality, aspirations and priorities change during your time in medical school? How?

Question 11: Did your personality, aspirations and priorities change soon after medical school? How?

Question 12: Does a medical degree improve marriage prospects for male and female graduates? How?

Question 13: Is the medical profession well suited to your gender? Why?