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Economic and Social Factors behind the Choice of Medical Profession by Saudi Female Students: An applied Study at Qassim University[1]

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Abstract. The study is aimed at exploring Saudi female students' attitudes toward studying medicine. The current study sample consisted of 105 randomly selected female students at Qassim University. The study is based on a questionnaire prepared for this purpose which comprised of 37 questions including the demographic information. Regression analysis reveals that anticipated salary, desire to learn new things, and having a good job are significant explanatory variables. The regression also shows that female students from high income families are more likely to choose medical profession. Factor Analysis Technique is used to identify the factors most important for explaining the motivation for pursuing medical profession. The factor analysis reveals that factors titled as human capital creation, social capital acquisition and social environment are the most important in explaining variation in the motivation for choosing the medical profession.

Keywords: Choice of medical profession, females, socio-economic factors, career motivation, Saudi Arabia.

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1. Introduction

The choice of a career is influenced mainly by advice from parents, relatives, friends, teachers, and counselors. The choice of career is a critical decision because it has an obvious impact on an individual's future life pattern (Beggs *et al.* 2008). Motivation inspires one towards learning and outcomes of learning like performance. According to Hustinx *et al.* (2009), motivation is an independent variable affecting learning, academic success, etc. as dependent variables.

Several papers have highlighted different factors that affect the choice of medical profession. These include but are not limited to the factors like aspiration to help people, need for biological and scientific knowledge, family or social influence, materialistic and monetary attraction, as well as personality type (Rosenthal *et al.* 1992; Barondess and Glaser, 1993; Baird 1975; Heiligers, 2012). McManus *et al.* (2006) find indispensability, helping people, seeking respect and interest in science as important factors. These factors can be significantly different between graduate and undergraduate students as explored by Al-Jahdali *et al.* (2014) who investigate the factors associated with deciding to enter a medical school by the graduate and undergraduate medical students.

Studies have shown that students' choices of primary health care or specialty careers are influenced by student-related factors, such as gender, race and ethnicity, socioeconomic status, rural or urban background, and attitudes and values (Phillips *et al.* 2009; Herren *et al.* 2011). Adequate career advice is also needed for medical graduates, because of a possible future shortage or abundance of medical graduates (Lambert and Goldacre, 2007; Alfred-Davidson, 2009). Generally speaking, the reasons for entering a medical program could be summarized into 5 main categories: being good at science subjects, wanting a good interesting career, always having wanted to be a doctor, influenced by friends and relations, and wanting to help or work with people (Wierenga *et al.* 2003).

However, for many students good "financial rewards" is a driver for wanting to enter a medical school. Kaplan (2008) find money to be the primary motivator in 49% opting for medical studies. In comparison a much higher percentage of pre-law students (71%) chose money as their primary motivator. On the other hand, 89% mentioned that a desire to help others, a genuine interest in the sciences, or personal exposure to medicine as the impetus for their decision (Daniel and O'Brien, 2008). Another factor which effects the choice of career is the avoidance of uncertainty and which enables to provide security in the long-run (Wildman and Torres, 2002).

For female students it is more challenging to select medical career due to its demanding nature because in general females think differently than males, i.e. hierarchical vs liberal progressive (Mihyeon, 2009). A traditional society like Saudi Arabia, expects more from females on family front and omestic responsibilities leaving little time for them to practice medical profession. In the

past, females were not considered fit to be doctors, among other professions, based on the argument that their personality profile was not suitable. However, by the end of the 19th century, women were gradually accepted into the medical profession, and became more and more present in this area (Milan *et al*. 2005). In the light of the above it is interesting to explore whether there are any other reasons for the increasing number of women in the profession? Are the motivations to choose medical profession by female the same as those of males? Are there any special motivations in the context of the society of Saudi Arabia? Meit *et al*. (2017) studied differences between male and female medical students and revealed significant personality differences between them on 11 of 16 personality factors as well as substantial differences in personality functioning between medical students and the general population.

One of the limiting factors concerning the participation of local female medical professionals is gender biasness towards females in the medical profession (Al-Tamimi, 2004; Tesch *et al.* 1995). Health training is one of the important components in medical sector. Moreover the demand and expectation of medical progress is increasing with time due to advancement of science and technology as well as an increase in population with time.

Buddeberg-Fischer *et al.* (2003) conclude that women plan their career more purposefully than men, and that gender plays an important role in academic achievement and career planning. Kusurkar *et al.* (2013) find that motivation as an independent variable appears to affect learning and study behavior, academic performance, choice of medicine and specialty within medicine and intention to continue medical study. Some of the studies suggest that there is no significant increase in contribution regarding female professionals' employment in Arab countries. There could be two probable reasons for this: firstly, placing little importance and expectation from females with regard to professional life and secondly, facing practical difficulties due to marriage and child bearing (Al-Tamimi, 2004).

However, from a practical point of view, it is very much essential to guide female candidates to develop an interest in the medical profession by highlighting the significance of being in the medical-clinical-scientific profession. Since the speeding times demand more efficiency and developments due to global competition thus females are also expected to play a promising role in the progress of Arabic region. Al-Saleh *et al.* (2010) conclude that if a positive motivation of female population is provided, it can surely lead to an increase in the female candidates who become medical professionals. This will not only make Saudi Arabia an equivalent contributor in the global health issues but will also help in the progress of local medical expertise and heath conditions.

This study is going to explore the factors that influence the choice of medical profession by the female students in the Middle-Eastern countries especially focusing on Saudi Arabia. Objective of this research is to motivate Saudi female students to contribute towards the medical sector and to fill the gap

between demand and supply of female medical professionals. There is a severe shortage of Saudi female medical professionals in Saudi Arabian health sector. The research question is what factors motivate female students in Saudi Arabia to choose medical profession. Appropriate policies can be adopted as a result of this research to minimize the gap between demand and supply of female medical professionals.

There are certain economic and social factors that can motivate female students towards joining the medical profession. Based on the previous theory and results of previous studies a few factors have emerged as motivating factors for the choice of medical profession by females. In the light of the above the hypotheses for this study are given as follows:

H1: Human capital creation affects Saudi female student's choice of medical profession positively.

H2: Social capital acquisition affects Saudi female student's choice of medical profession positively.

H3: Social environment affects Saudi female student's choice of medical profession positively.

The rest of the paper is organized as follows. Section 2 contains discussion in the context of Saudi Arabia, Section 3 explains the methodology and data, Section 4 discusses the results whereas Section 5 concludes followed by references and appendix.

2. Health Sector in Saudi Arabia: A Review

In Saudi Arabia, traditionally there has been limited role of females in the provision of medical services. Whereas there has been great demand for medical services provided by female physicians because of a high proportion of female population, so far this need has been fulfilled by female medical professionals hired from other countries. However, now the government is giving much importance to training Saudi females in different medical fields.

As the education in Saudi Arabia has improved, female students have become more capable to achieve than in the past. Now females are allowed to enter a lot of fields that were not accessible for them in the past, and one of them is medicine. The reasons include more awareness of women's rights, changes in the culture due to globalization, as well as higher levels of literacy and education in Saudi Arabia[2]. We are seeing nowadays an increase in the number of girls that are choosing medicine. This study will try to find out the reasons behind this change in attitude.

2 In March 2014, NCB Capital, the investment bank belonging to Saudi Arabia's largest bank, National Commercial Bank (NCB), appointed Sarah Al-Suhaimi as its chief executive and a board member. Ms Al-Suhaimi, the first female CEO at a Saudi investment bank.
(www.cpifinancial.net/flipbooks/IBF/2014/84/files/assets/common/downloads/Islamic%20Business%20&%20Finance%20Issue%2084.pdf)

Saudi government has set a target for 2030 of a physician-to-population ratio of 1:500, with 60% of all doctors in the Kingdom being Saudi nationals. This target compares with the World Health Organization (WHO) recommendation of 1:600. To meet this target, it was estimated that Saudi Arabia needed to graduate 1750 new medical doctors in 2015; 2400 in 2020; and 3070 in 2030. These projected estimates were based on Saudi Arabia's population of 30 million and its annual growth rate of 2.5% as at 2012 (Smith and Abouammoh, 2013).

However, Saudi citizens have faced a situation in which foreign nationals have been displacing Saudi youth in the market for jobs requiring high levels of human capital development (Ramady, 2005). This shows that Saudi health care system is challenged by the shortage of local health care professionals, such as physicians, nurses and pharmacists. Majority of health personnel are expatriates and this leads to a high rate of turnover and instability in the workforce. According to the Ministry of Health (MOH), the total health workforce in Saudi Arabia, including all the sectors, was about 248,000; more than half of them (125,000) worked in the MOH. Saudi nationals constituted 38% of this total workforce. Of these, 23.1% were physicians, while 32.3% were nurses (Almalki *et al.* 2011).

Table 1: Physicians in Saudi Arabia in 2013

1a. Ministry of Health	Saudi	Non Saudi	Total	1b. Other Government	Saudi	Non Saudi	Total
Male	7047	20355	27402	Male	5547	4228	9775
Female	3502	6991	10493	Female	1269	2533	3802
Total	10549	27346	37895	Total	6816	6761	13577
1c. Private Sector	Saudi	Non Saudi	Total	1d. Overall	Saudi Percent	Female Percent	Total Number
Male	392	19622	20014	MOH	27.8%	28%	37895
Female	233	8756	8989	Other Govt	50.2%	28%	13577
Total	625	28378	29003	Private	2.2%	31%	29003

Source : MOH Health Statistics Annual Book 2013

Based on the statistics of the government for 2013 (Table 1), it is observed that the number of physicians working in medical sector in KSA was 80,475, out of which the share of males is 71% and the females contribute only 29% share. Similarly, out of the total number of physicians only 22.4% were Saudi and the remaining 77.6% were non-Saudi. The government recruited 62,499 foreign doctors. It is predicted that by the end of 2015, the annual expenditure for these foreign health care professionals will reach a minimum of $8 billion (MOH, 2013).

The unemployment rate for Saudi women is around 36% and this percentage include only women that are in search for a job and does not include those who are not in search. The number of Saudi students in health sciences in 2012 was 102,291. From this number male were 50.6% and females were 49.4%. Whereas the number of Saudi students who graduated from health sciences in 2011 was 4,958: Out of these 48% were males and 52% were females (MOL, 2014).

Al-Fouzan *et al.* (2012) studied medical students in Kuwait and identified the factors that contributed to students' decisions in studying at medical college. The most important factors were advice from friends or admiration of genuine interest in medical college. These factors vary according to the lifestyle, interest in research or to gain higher income level. Therefore, from our study we come to know that not always the same factors motivate students to pursue medical studies.

However, it is not easy for the female to succeed in medical profession. Al-Tamimi (2004) concludes that Saudi women in academic medicine have succeeded only at the junior level while facing slower promotion to higher ranks. The percentage of women graduating from Qassim University medical school rose from 7.7% in 1984 to 45.1% in 2013. Concurrently, there were dramatic shifts in the career choices of Qassim region students.

3. Methodology and Data

The target population for this study was the college of medicine students at Qassim University. In order to select the respondents stratified random sampling method was adopted. A cross-sectional survey was conducted in 2014 among 105 female medical students (Year 1 to Internship program) of the Faculty of Medicine at Qassim University, Saudi Arabia. A pre-tested self-administered structured questionnaire was used for data collection. The questionnaire consisted of 37 questions including the demographic information and family background of the students interviewed. Ordinary Least Squares technique is used to find the effects of important factors that determine the motivation for studying medicine. The background information about medical professionals is collected from different online sources discussed by Al-Zalabani (2011).

Factor Analysis technique was used to identify the most important factors for the analysis of motivation of Saudi female student for studying medicine. The multiple factor model was named as "Factor Analysis" by Thurstone (1931). Factor Analysis is a multivariate technique that identifies important factors responsible for covariance in a set of independent variables. Factor analysis helps us to specify the important variables and it also helps to pinpoint important variable by eliminating the least important ones. A factor generally comprises of variables that can be grouped under some common dimension. Factor analysis as well as regression, based on the important factors identified, was executed using the statistical package SPSS.

4. The Results

An analysis of percentage of responses for family background reveals some interesting results. The results of family financial background reveals that a two third majority of students belong to rich families. Fathers of more than 52 percent of the student are highly educated. These results show that a good financial and educational family background positively affects a student's chances of joining medical studies.

An analysis of factors influencing the choice to study medicine reveals that helping people is the strongest factor because 70 percent of respondents strongly agreed with this factor. Having good job is the objective of 95 percent of the students. Fifty percent of the students had a doctor in their family. For a majority of 75 percent of the students, anticipated higher social status was an important factor. However, 60 percent of the students believed that anticipated salary was an important factor in choosing medical profession. So the majority of students considered anticipated salary as an important factor. A majority of 70 percent of the students thought that peer pressure was not a factor in the decision to choose medicine. About eighty percent of the students well-liked the medical profession whereas about 11 percent didn't like it.

The inquiry about the difficulty of medical study reveals that 95 percent of the students consider these studies as difficult. Ninety-two percent think that having good grades is important in this field of study. For about 84 percent of the students it is very important to learn new things and 95 percent are curious about how things work. Ninety-five percent of the students recognize the need for new knowledge. However, interestingly, they are not willing to spend much time in this learning. Only about 35 percent of students like being busy with school work/study. About 40 percent of the students think that university admissions system for applying to the college of medicine is not efficient. Thirty-five percent consider the educational standard of the college as not very good.

An overwhelming majority of 86 percent of the students anticipate a big effect of this study on their life style. It is interesting to note that about 70 percent of the students thought that it will be easy to practice medicine. And a majority of 85 percent thought their family would be supportive in following the medical carrier. However, 70 percent of them admitted that it is difficult for a married woman to follow medical profession.

A great part of the female students that are engaged in medical study live in urban areas, their fathers have high education and a good profession, their mothers are housewives that can encourage and sustain them to follow medical study. Also a great part of them have income more than 10,000 riyal per month that means that these girls have a suitable environment to study and maintain their lifestyle. A large number of these girls decided to follow the medical field when they were children before 15 years of age and before entering the university, which means that they are motivated from an old passion. A summary of the demographic information is given in Table 2.

Table 2: Demographic Information of Respondents

Starting year of medicine study	**2010**	**2011**	**2012**	**2013**	**2014**	**Missing**	**Total**
Frequency	2 (2%)	19 (18%)	40 (38%)	31 (30%)	1 (1%)	12 (11%)	105 (100%)
Year of birth	1991	1992	1993	1994	1995	Missing	Total
Frequency	4 (4%)	22 (21%)	39 (37%)	27 (26%)	6 (6%)	7 (7%)	105 (100%)
Living Area	Rural Area	Urban Area				Missing	Total
Frequency	75 (71%)	14 (13%)				16 (15%)	105 (100%)
Mother's Education	Primary	Intermediate	Higher			Missing	Total
Frequency	11 (11%)	50 (48%)	41 (39%)			3 (3%)	105 (100%)
Father's Education	Primary	Intermediate	Higher			Missing	Total
Frequency	12 (11%)	36 (34%)	53 (51%)			4 (4%)	105 (100%)
Mother's Profession	Medicine	Teacher	House Wife	Other		Missing	Total
Frequency	5 (5%)	23 (22%)	50 (48%)	20 (19%)		7 (7%)	105 (100%)
Father's Profession	Medicine	Engineering	Teacher	Own Business	Other	Missing	Total
Frequency	3 (3%)	10 (10%)	37 (35%)	38 (36%)	12 (11%)	5 (5%)	105 (100%)
Family Income (SR)	<5000	5000-10000	10000-20000	>20000		Missing	Total
Frequency	6 (6%)	19 (18%)	34 (32%)	36 (34%)		10 (10%)	105 (100%)

Source: Primary data collected through interviews.

So, we can say that what motivates these students to follow the medical study is their passion for the profession. It is consistent with the finding of Al-Dabal (1998) who showed that personal interest was the main reason behind the students' choice of medicine. What affects this passion are many factors and some of them are: helping people, like to learn new things, like being busy with their school work, they want to have something to say in the future (to be proud), curiosity to know new things, necessity for new knowledge. All these factors we judge that affect the passion by making the question: Why you like the medical study? So, the first criterion was the response to this question. The second criterion was based in the

mode, the great part of the respondents strongly agree with this factor, by giving these factors a strong impact in their passion for medicine (the dependable variable).

We take four elements which based on their contents look to be the most important factors. They are: helping people, learning new things, motivation for the future, curiosity to know how the things work. From our statistical analysis we can see that all the hypotheses that these factors affect the passion for medicine stays true because the table t value is lower than the calculated t value (Table 3). But the relationship between these factors and the passion for medicine is not linear. The strong relationship exists between helping people, the desire to have a good future with the passion for medicine.

From the results of basic statistical analysis, we can say that the respondents did not get their motivation from their parents. They try to be independent in their thinking and also don't see marriage, or being female as an obstacle to practicing their profession. They don't have a high level of satisfaction with the university. From the sixty students that don't want medical study,1 in 5 interviews confirm that they liked medicine and took a preparatory course but they didn't have a clear vision. As we know that at this phase of their life they are not very confident about their future plans and feel confused, so they give up medical study.

Regression analysis is carried out by having motivation to study medicine as a dependent variable. Question number 3 in the questionnaire measures this motivation. The signs of the coefficients of dependent variables like anticipated salary, to learn new things, family income and having good job are expected to be positive.

Regression results reveal that anticipated salary, to learn new things, and having a good job are statistically significant explanatory variables. The results are given in Table 3. The coefficient of determination is 29%, however, considering the cross section data its value is acceptable. The regression also shows that female students from high income families are more likely to choose medical profession. Table 4 presents correlation coefficients between important variables.

Table 3. Regression Results

Sample: 1 105				
Included observations: 105				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ANTICIPATED SALARY	0.447234	0.139991	3.194731	0.0019
FAMILY INCOME	0.124112	0.065312	1.900287	0.0602
LIKE LEARNING NEW THINGS	0.291576	0.111482	2.615456	0.0103
HAVING GOOD JOB IS THE AIM	0.369036	0.113138	3.261818	0.0015
R-squared	0.292595	Mean dependent var		1.838095
Adjusted R-squared	0.268613	S.D. dependent var		1.169515
S.E. of regression	1.066369	Akaike info criterion		3.003747
Sum squared resid	114.8514	Schwarz criterion		3.104850
Log likelihood	-153.6967	Hannan-Quinn criter.		3.044716
Durbin-Watson stat	2.022970			

Source: Regression run on the data using EViews.

Table 4: Means, standard deviations and Pearson correlations of important variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10
EXTENT OF ADMIRATION	2	1.16	1.000									
ANTICIPATED SALARY	1	0.71	0.235	1.000								
EFFECTS ON LIFESTYLE	2	1.19	0.091	-0.094	1.000							
HAVING GOOD JOB IS THE AIM	2	0.94	0.339	0.007	0.316	1.000						
HELPING	2	0.61	-0.085	-0.004	-0.054	-0.156	1.000					
FAMILY INCOME	3	0.91	-0.071	-0.041	-0.131	-0.151	0.127	1.000				
LIKE BEING BUSY	3	1.17	0.134	0.106	0.090	0.007	-0.009	-0.223	1.000			
NEEDING NEW KNOWLEDGE	2	0.99	0.335	0.103	0.226	0.564	-0.109	-0.091	0.158	1.000		
SOCIAL CONTACT	1	0.70	0.020	0.064	-0.021	0.119	0.315	0.001	-0.121	0.068	1.000	
SOCIAL STATUS	1	0.72	0.137	0.447	-0.022	0.014	-0.044	-0.131	0.205	0.081	0.228	1.000

Source: Correlations computed on the data using EViews.

The results of factor analysis show that factors titled as "Human capital creation", "Social capital acquisition" and "Social environment" are the most important in explaining variation in motivation for studying medical profession. The first and most important factor "Human capital creation" includes variables like "Needing new knowledge", "Having good job is the aim", "Study hard to have future", "Like learning new things", "Extent of opinion independency", and "Effects on lifestyle". The second factor "Social environment" includes variables like "Doctor in family", "peer pressure", "Role of family and society", "past illness experience" and "being from urban area". The third most important factor "Social capital acquisition" includes variables like, "Social status", "Social contact", and "Helping others". The rest of the variables have insignificant effect and consequently are eliminated from the analysis. The components matrix has been reproduced in Table 5.

Table 5: Component Matrix[a]

		Components						
		1	**2**	**3**	**4**	**5**	**6**	**7**
Human capital creation	Needing new knowledge	.741						
	Having good job is the aim	.740						
	Study hard to have future	.644						
	like learning new things	.637						
	Extent of opinion independency	.595						
	Effects on lifestyle	.534						
Social capital acquisition	Doctor in family		.566					
	Peer pressure		.522					
	Role of family and society		-.471			.419		
	Past illness experience		.471					
	Being from urban area		.465					

		Components						
		1	2	3	4	5	6	7
Social environment	Social status			.525				
	Social contact			.505				
	Helping others			.452				
	Mother profession				-.687			
	Women have some limitations				.525	.446		
	Efficient admin				.503			
	like being busy					-.565		
	Anticipated salary						.633	
	Research			.501			.571	
	Achieving is more important than studying						.459	
	Following career is easy							.537

Extraction Method: Principal Component Analysis.
a. 7 components extracted.
Source: Factor Analysis results using SPSS.

After identifying the three important factors, we proceed to do the regression analysis. We make motivation as a dependent variable and the three factors as independent variables. The results of regression are given in Table 6a, 6b and 6c. The results confirm the significance of the three factors described above.

Table 6a: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.837	.107		17.112	.000
	REGR factor score 1 for analysis 3	.428	.108	.364	3.966	.000
	REGR factor score 2 for analysis 3	.304	.108	.294	2.815	.000
	REGR factor score 3 for analysis 3	.231	.108	.206	2.139	.000
	REGR factor score 4 for analysis 3	.101	.108	.086	.934	.353
	REGR factor score 5 for analysis 3	.072	.108	.061	.669	.505

a. Dependent Variable: Extent of admiration

Table 6b: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.718[a]	.515	.492	1.095

a. Predictors: (Constant), REGR factor score 5 for analysis 3, REGR factor score 4 for analysis 3, REGR factor score 3 for analysis 3, REGR factor score 2 for analysis 3, REGR factor score 1 for analysis 3
b. Dependent Variable: Extent of admiration

Table 6c: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	124.824	5	24.965	20.839	.000[a]
	Residual	117.397	98	1.198		
	Total	242.221	103			

a. Predictors: (Constant), REGR factor score 5 for analysis 3, REGR factor score 4 for analysis 3, REGR factor score 3 for analysis 3, REGR factor score 2 for analysis 3, REGR factor score 1 for analysis 3
b. Dependent Variable: Extent of admiration
Source: Factor Analysis results using SPSS.

In addition to the factor analysis a test of variable reliability is performed using Cronbach's alpha. A value of 0.867 Cronbach's alpha shows that the variables are reliable. It shows a high level of internal consistency of the scale for the twenty one questions.

As a conclusion we can say that the real motivator for the female student to study medicine is coming from themselves. In order to attract students towards medicine, incentive programs should be offered at school levels to increase their desire for medical profession. Also to increase the performance in the preparatory course they need to create a clear vision and encourage them to go ahead with this type of study.

Our results also confirm the following:

- Ineffective administration of the first step in studying medical program.
- The medical profession is difficult to follow for female students.
- Female students don't have social problem in pursuing career.

5. Conclusions

The conclusion of this study is that motivation of undergraduate female medical students in Saudi Arabia tends to come from helping people, interest in scientific research, learning new thing and being curious about how things work. On the other hand, the graduate medical students had significantly different demographic and motivating factors which are more reflective in the general population. It will be interesting to do further study to compare student performance between undergraduate and graduate students, and also to assess the factors influencing the admitted and their school performance. It should be stressed that these findings may be related to a specific society and culture and may not be extrapolated to other countries. However, the literature suggests that some of these motivators can be generalized.

There seems to be gender discrimination in the medical jobs market. However, according to Hakim (2006), it can be attributed to the preference theory which explains and predicts women's choices between market work and family work as their intentional choice of family over office work. In the light of the above results we strongly recommend to develop a policy focused towards encouraging female Saudi students to adopt medical profession. Here are some of the suggestions to develop a possible model for motivation of Saudi females for pursuing medical profession:

- Women medical professionals should be given preference in interviews and the internship should be focused on their area of specialization. This will develop their interest and thereby their efficiency can be increased.
- Female professionals should do research during medical training; thereby it will be possible to bridge the gap in medical science advancement between Western countries and Saudi Arabia.
- Female students should be motivated towards the medical profession starting from their school and college education. There should be some topics at the school and college level education which are related to women's health research, medical career development, prospects of medical profession; and advantages of being in the medical profession for females.
- Factors like low intake capacity of institutions, low morality in the workspace for women and restriction of females from participating in the intellectual engagement should be removed with precise care towards female candidates.
- Another most important part for preparing this motivational role model regarding females is that there should be balance between family and career. Females having children or dealing with family related ethical issues should be supported by trained personnel of the concerned/respective health institutions.
- Policies should be adopted to motivate females to enter the medical profession, smooth transfer of knowledge irrespective of gender biasness, teaching and mentoring should be polite and smooth towards female professionals and female candidates should be encouraged to pursue their dreams in research or towards a momentous prospect into medical profession.

However, there are some limitations to this study. The study sample was drawn from the students of the medical college of Qassim University and may not be generalized to the other parts of Saudi Arabia. To better understand the career choice additional research would be required covering the rest of the medical colleges of Saudi Arabia.

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Appendix:

QUESTIONNAIRE:

Background:

Your year of birth: _____

Starting year of your medicine study: _____

Please circle your answer:

Do you belong to:	Rural Area	Urban Area	
Mother's Education:	Lower	Intermediate	Higher
Father's Education:	Lower	Intermediate	Higher
Father's Profession:	Medicine	Engineering	Own Business
Other_____			
Mother's Profession:	Medicine	Engineering	House Wife
Other_____			
Family Income (SR):	<5000	5000-10000	10000-20000
>20000			

The Questionnaire:

1-When did you decide to follow medicine study?

At age: <10yrs 10-15 >15

2-To what extent have the following factors influenced your choice to study medicine?

	Not at all	Somewhat	Strongly
Helping people	_____	_____	_____
Social contact with people	_____	_____	_____
Interest in scientific research	_____	_____	_____
Personal experience with illness	_____	_____	_____
Doctor in your family	_____	_____	_____
Anticipated salary	_____	_____	_____
Anticipated social status	_____	_____	_____
Peer pressure	_____	_____	_____

3-How much you like the medical profession?
Too much 1 —— 2 —— 3 —— 4 —— 5 Too little

4-If you can rate the difficulty of the medicine study what it can be?
Too Difficult 1 —— 2 —— 3 —— 4 —— 5 Too Easy

5-How much important are the grades in following this type of study?
Very important 1 —— 2 —— 3 —— 4 —— 5 Not important

6-The administration of the university implements a very efficient system in applying for medicine study. How much you agree with this?
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

7-The programs that are following in medicine study don't give a clear vision about the future of them that follow this type of study. How much you agree with this?
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

8-Qassim University doesn't have good standard in the college to prepare for this profession. How much you agree with this statement?
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

9-How much can this type of study affect your life-style?
Too much 1 —— 2 —— 3 —— 4 —— 5 Too Little

10-Role of your family or the society to follow medical carrier after completion of this study?
Very encouraging 1 —— 2 —— 3 —— 4 —— 5 very discouraging

11-Will it be difficult for you to practice this type of profession?
Very Difficult 1 —— 2 —— 3 —— 4 —— 5 Very Easy

12-For the medicine students it is easy to follow their career. How much do you agree with this?
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

13-For a medical student without specialization it is difficult to find a good job. How much you agree with this?
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

14-The profession of a doctor is an easy job for a woman. How much you agree with this?
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

15- A married woman has limitations in practicing the medical profession. How much do you agree with this?
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

16- I make an effort at school/for my study, because others expect it of me.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

17- I like learning new things.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

18- I like being busy with my school work/study.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

19- I study hard because I want to have something to say in the future.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

20- I like to decide for myself what gets done and when.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

21- I am curious about how things work.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

22- I try to get good grades because I want to get a good job in the future.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

23- I have a need for new knowledge.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

24- I do my best at school/ in my study because otherwise I will have arguments with my parents.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

25- I think that what I can achieve with my study, is more important than that I like what I am studying.
Strongly Agree 1 —— 2 —— 3 —— 4 —— 5 Strongly Disagree

Any comments about motivation for medical profession? (Give your opinion)

_____
_____
_____
_____
_____

This is the end of the questioner. Thank you very much for your cooperation.

العوامل الاقتصادية والاجتماعية لاختيار مهنة الطب من وجهة نظر الطالبات السعوديات: دراسة تطبيقية على جامعة القصيم

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ملخص البحث. تهدف الدراسة إلى استقصاء توجهات الطالبات السعوديات نحو دراسة الطب. وتتكون عينة الدراسة من ١٠٥ طالبة تم اختيارهن عشوائيا بجامعة القصيم. وتستند الدراسة على استبيان تم إعداده خصيصا لها ويشمل على ٣٧ سؤالا بما في ذلك المعلومات الديموغرافية. ويشير تحليل الانحدار إلى أن الراتب المتوقع، وتعلم أشياء جديدة، والحصول على وظيفة جيدة تدخل كمتغيرات مفسرة معنوية. ويدل تحليل الانحدار أيضا على أن الطالبات المنحدرات من الأسر ذات الدخل المرتفع هن الأكثر احتمالا لأن يخترن مهنة الطب. وقد تم استخدام طريقة تحليل العوامل للتعرف على العوامل الأكثر أهمية في تفسير الدافعية على السعي إلى الوظيفة الطبية. ويبين تحليل العوامل بأن العوامل المتمثلة في تكوين رأس المال البشري، حيازة رأس المال الاجتماعي والبيئة الاجتماعية هي أهم المتغيرات التي تفسر الدافعية لدراسة مهنة الطب.

الكلمات المفتاحية: اختيار مهنة الطب، الطالبات، العوامل الاقتصادية الاجتماعية، الدافعية المهنية، المملكة العربية السعودية.