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FACTORS THAT AFFECT IN DETERMINING THE MEDICAL SPECIALTY AMONG SENIORS MEDICAL STUDENTS AND INTERNS IN TABUK UNIVERSITY.

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ABSTRACT

Background: Many factors play role in choosing the medical specialty of the graduated students from medical colleges.

Objectives: To identify the specialty preference, among medical students in University of Tabuk and the factors influencing their choices.

Methods: A cross-sectional study was applied at Faculty of medicine Tabuk University KSA. One hundred and twelve seniors' were included, using an electronic questionnaire to collect the data. Data entry and analysis were performed using Microsoft Excel .

Results: The most preferred specialty among 6th year medical students and interns was internal medicine followed by surgery then family medicine; the least chosen specialties were forensic, dermatology, pathology, and Radiology. Most of the participants were influenced in choosing the specialty by the attractiveness of the specialty, interests in the field and lifestyle

Conclusion: The most preferred specialty among males was internal medicine followed by surgery, family medicine and psychiatry. The least specialty is forensic, emergency, ENT and ophthalmology. Most of the participants were influenced by their interests in the field and lifestyle to choose the specialties. On the other side; the most preferred specialty among females was surgery followed by internal medicine then pediatrics and the least specialties were dermatology, pathology and radiology. The highest percent were influenced by interests in the field then attractiveness of the specialty. We recommend further studies on all medical students and interns allover KSA to explore the factors affecting spatiality choice and taking them in consideration in undergraduate curriculum design and application and during post graduate training.

Keywords: seniors, medical students, interns, medical specialty.

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INTRODUCTION

Medical students are the most powerful human resources of the country, due to their direct effect on the health care system [1]. Moving from undergraduate to a professional practice require medical student to take the most important decision regarding choosing their medical specialty [2]. Choosing a medical specialty is a complex and dynamic process, because the preference of medical specialties chosen by medical graduates represent an important part in the future workforce in health-care system [3]. With the continuing evolution of health care delivery and with advances in medical technology, the appropriate specialty mix within the medical workforce is still debated. Studying career preference can help provide important information to aid in planning educational programs, set priorities, and plan for the provision of adequate health care [4].

Training of the medical students throughout their year of studying and exposure to different medical specialties is important as it has great effect on their specialty choice in the future [4]. Different residency programs affect the choice of specialization in terms of application, quality, time period, program plan, supervisors, work schedules, and vacations[5]. Many studies explore the multiple factors that influence the specialty choices of medical students, this may explain the reasons by which certain specialties tend to attract students more than others, it includes; the genuine interest in the field, advice from friends or family expectation, and admiration of a certain mentor [6].

Medical career preferences are also linked to the possibility of private practice, attractiveness of the specialty, an interest in research and

teaching or perceived benefits of particular specialties, high salary, social standing, lifestyle choices [7]. Gender can also affect the career preferences of students, Differences between men and women regarding, specialty preferences are notable in general practice [8]. Considering lifestyle and long working hours female doctors tend to choose gynecology and dermatology and underrepresentation in general and orthopedics surgery. [9]. A previous study found that female students tend to choose medical specialties with less technical effort and more controllable life style and are less represented in different surgical specialties due to more suitability to their family responsibilities and social life. In the same time the male medical students are less motivated in a specialty like Obstetrics& gynecology due to perceived barriers represented in patient refusal to give consent due the culture preference of female physician in this specialty [10].

Most students think that working hours have an influence on career preference. which may be due to the importance of work – life balance in the Eastern culture and how part-time allows physicians to also manage family duties, which is especially important for female doctor [11]. Job opportunities in the selected specialty is also an important factor as the fewer the number of opportunities the specialty offer the lower the desire of students to choose [8].

Impact of knowledge, skills, preclinical and clinical experiences, academic performance, and interaction with medical students, health professionals, and patients. Also, the difference in personalities, preferences, interests, intellectual and physical capabilities, commitment, and the importance of professional guidance and experience in

choosing a medical specialty [12]. This research aims generally at identifying the specialty preference, among medical students in University of Tabuk and the factors influencing their choices.

METHODS

Ethical consideration:

The first page of the questionnaire includes statements about; explanation of the purpose of this study, information will be used only to achieve the goal of study, eligibility criteria and consent will be taken from participants. Ethical approval from ethical committee of Tabuk University was obtained.

Study design and setting: A cross-sectional study was take place over a period of two weeks in Tabuk City, particularly at Faculty of medicine, Tabuk University in year 2020.

Study Participant and sample size: our participants were all interns and last year (6th) year males and females medical students from Tabuk University in Tabuk city. The total number was (152) seniors and interns in Tabuk University who were invited to participate in the study. An online questionnaire was sent to all of them and those who accurately respond after excluding incomplete answers were (112) with a response rate of 73.7%.

Data collection tool: the data was collected through pre designed self-administrated electronic questionnaire which was designed based on other previous similar study (1), it was distributed through social networking sites. Questionnaire was consisting of 17 open ended and close ended questions asking about a-sociodemographic variables: age, gender and educational level.

b-specialty interest: they were asked to choose one preferred specialty only.

c-factors affecting choosing the specialty: were twelve questions with answers (Yes/No) included:

- *Attractiveness of the specialty*; relative to other specialties.
- *Interest in the field*;
- *Interest in research and teaching*.
- *Role model*; related to the good impression by the teacher in faculty or supervisor in hospital
- *Adequate private career*; referred to the ability to establish his own private practice
- *Suitability for the lifestyle*; including presence of night shifts and in calls, free time for the family without work responsibility.
- *Family expectation*; what the family expects from him/her to be in the future.
- *Advice from friends*; who experience that specialty.
- *Social standing*; related to social strength of the specialty and also in the job market.
- *High future income*; financial benefits from the chosen specialty.
- *Career opportunities*; the future promotion related to the specialty including ability to has post graduate studies.
- *Specialty related hazards and infection* question specially for interns was if decision regarding specialization changed after the year of internship or not.

Data management and analysis: data entry and analysis were performed by using Microsoft Excel, numbers and percent were used to represents data in tables and figures.

RESULTS

Participants

Regarding the distribution of our participants according to their gender and profession;

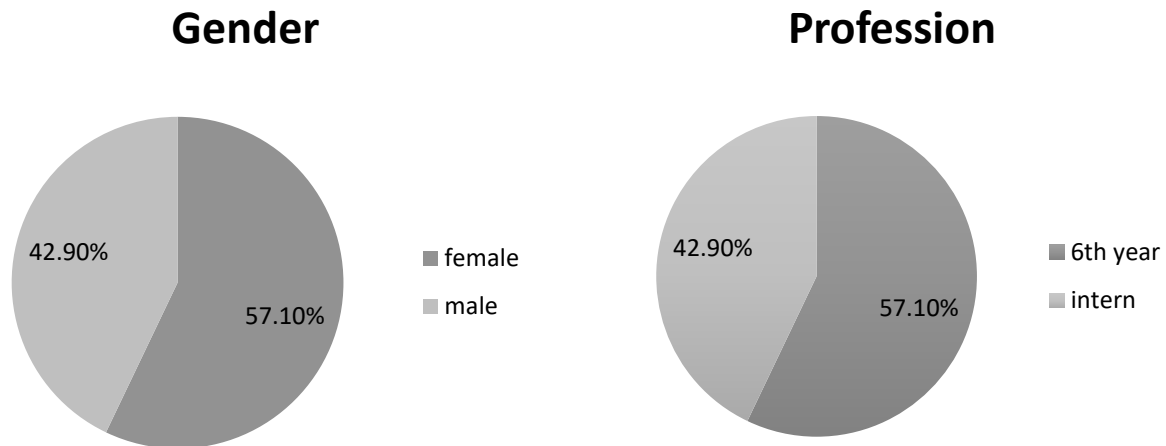


Figure 1: Distribution of the Participants According to the Gender.

Figure.2: Distribution of the Participants According to the Profession.

Figure 1 and Figure 2 demonstrate that 57.1% were males and 42.9% were females, also the profession of them was the same percent for 6th year students and interns respectively; "6th year females were 32.14%, 6th year male were 24.1%, interns male represents 18.75% while female represent 24.1%".

Specialty choices among male and female participants in our study were presented in (Table 1); the most preferred specialty among males in Tabuk University was internal medicine 10% followed by surgery 6%, family medicine 6% and psychiatry 6%, While preventive 3% and the least specialty was pediatrics, forensic ,emergency ,ENT and ophthalmology 1% On the other side The most preferred specialty among females in Tabuk University surgery 10% then internal medicine 9% followed by pediatrics 6%, psychiatry 5% and ophthalmology 5% while the family medicine, ENT and preventive was 3%. The least chosen specialty was emergency 2% and dermatology, pathology and radiology 1%.

Figure 3 demonstrate the factors affecting

Specialty	Male (48)		Female(65)	
	N	%	N	%
Internal medicine	11	10%	10	9%
Surgery	7	6%	11	10%
Family medicine	7	6%	5	4%
Psychiatry	7	6%	6	5%
Pediatric	1	1%	7	6%
Ophthalmology	1	1%	6	5%
OBGY	0	0	3	3%
Preventive Medicine	3	3%	3	3%
ENT	1	1%	3	3%
Emergency	1	1%	2	2%
pathology	0	0	1	1%
Radiology	0	0	1	1%
Dermatology	0	0	1	1%
Forensic	1	1%	0	0
Not yet	8	7%	6	5%

Table 1. Specialty choices among male and female participants in medical college Tabuk University.

choosing the specialty among the participants;

Factors affecting specialty	Male(48)		Female(65)	
	N	%	N	%
Attractiveness Of The Specialty	38	33%	55	50%
Interest in the Field	42	37%	61	54%
Interest in Research And Teaching	25	22%	41	36%
Role Model	23	20%	31	27%
The Specialty has an Adequate Private Career.	23	20%	33	29%
Suitable for the Lifestyle	42	37%	51	45%
Family Expectation	19	17%	24	21%
Advice from Friends	14	12%	15	13%
Social Standing	20	18%	30	27%
High Future Income	23	20%	32	28%
Career Opportunities	37	33%	49	43%
No or Little Work Related Hazards of Infection	18	16%	22	19%

*More than one factor could be chosen

Table 2: Factors affecting choosing the specialty among male and female participants

the highest factors were; Interest in the field 91%, attractiveness of specialty 83%, Suitable for the lifestyle 82% ,Career opportunities 76% and teaching 58%, and other factors as; the specialty has an adequate private career 49%, high future income 48% and Role model 47%.While the social standing 45%,family expectation 38%, No or little work related hazards of infection33.92% and advice from friends 25% .

Table 3 shows the change in the decision

regarding the specialty after the year of internship; it was changed in 69% of interns, while not changed in 31% of them.

DISCUSSION

In this study we aimed to identify the factors that affect in determining the medical specialty among seniors' medical students and interns in Tabuk University.

Our study show the internal medicine was favorite specialty in Tabuk university (19%) followed by surgery (16%) in both males and females, but in university of Dammam the favorite specialty was internal medicine (14.77%) followed by family medicine (9.2%) [13], while in Gambia (62.3%) choose Surgery, (61.3%) choose Obstetrics and Gynecology [12]

Also, Sex influences indicated that males preferred internal medicine (10%) followed by family medicine (6%), surgery (6%) and psychiatry (6%) but no male participant choose OBGNE, which indicate that the social and the cultural barriers are still present regarding that specialty.

Female participants in our study preferred surgery (10%) followed by internal medicine (9%) then pediatrics (6%). We can notice that the female choices were directed to the major medical specialties, which could be referred to more self-confidence of the female seniors and interns in their capabilities as well as good and adequate training and role model in these specialties. Our results were different from a study conducted in Dammam University as males preferred pediatrics and emergency and females preferred Family medicine [13], these differences may be due to the different in the students' and interns' experiences regarding undergraduate study and postgraduate training

between the two Universities.

males was ‘intellectual content of the specialty’

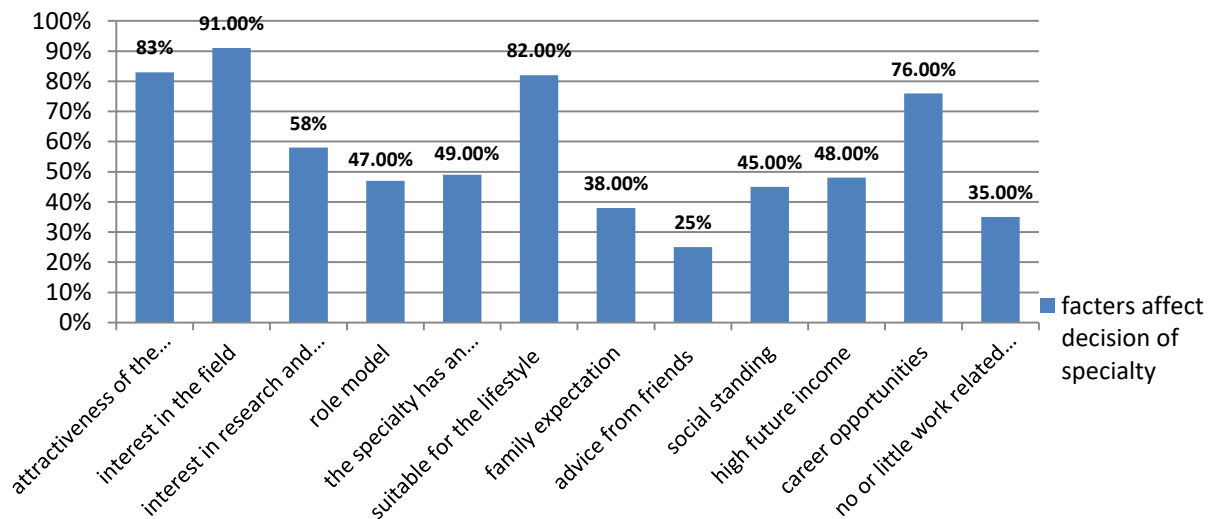


Figure 3: Factors affecting choosing the specialty among the participants.

	Males	Females	Total N	Percentage
Yes	16	17	33	69%
No	5	10	15	31%

Table 3: Change in the decision regarding the specialty after the year of internship.

According to the gender in our study the most important factors for choosing the specialties among both gender was; Interest in the field (91%), attractiveness of the specialty (83%) and suitability to their life style (82%), and the least factor was the advice from friends (25%). In the study conducted in University of Dammam, the lifestyle factor was the most influential one for choice of the specialty (44.75%) [13], but this was different in the study in Gambia as among female respondents the most important factor was ‘focus on urgent care’ (65.5%), the most important factor that strongly influenced choice of specialty by

(60.4%) [12]. Also in the study carried out in U.S medical school both lifestyle and income became increasingly important to the graduating medical students [14].

Higher percentage of the interns changed their opinion about the choice of the specialty after their joining of the internship. This is an important indicator about the role of this year and the training in hospitals in formulating the future of the medical students.

CONCLUSION AND RECOMMENDATION

The most preferred specialty among males in Tabuk University was internal medicine followed by surgery, family medicine and psychiatry. The least chosen specialty is forensic, emergency, ENT and ophthalmology. The Large percent were influenced by interests in the field and lifestyle.

In other side The most preferred specialty among females in Tabuk University was surgery followed by internal medicine then

pediatrics. The least chosen specialty dermatology, pathology and radiology. The highest percent were influenced by interests in the field then attractiveness of the specialty. We recommend further studies on all medical students and interns all over KSA to explore the factors affecting specialty choice and taking them in consideration in undergraduate curriculum design and application and during post graduate training.

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LIMITATIONS:

Not all intern respond to our online questionnaire as most of them were busy preparing for SMLE and CV preparation.

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