

Medical specialty choice: a dilemma between dream and necessity

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Abstract: The definition of a medical specialty is important both for the student's future professional career as well as for the diversity of specialties and the number of professionals that will make up a given health system. Identify the areas of activity preferred by medical school specialists and compare them with government needs. Methods: A multicenter study with a cross-sectional, quantitative approach. The sample was made up of 201 finalists. Data were collected through a closed questionnaire automatically generated by Google Forms and exported to the statistical program (SPSS26) to calculate absolute and relative frequencies. The three specialties preferred by the finalists were Gynecology/Obstetrics (18.8%), Pediatrics (15.6%) and General Surgery (13.3%); the factors that led them to choose their specialties were affinity for the specialty (32.8%) and admiration for a teacher (19.5%). Comparing these results with the state's needs, we found that student preferences were directed toward priority specialties at the tertiary level. It was observed that the most commonly chosen specialty was Gynecology/Obstetrics; the determining factor was affinity for the specialty and in comparison, with what the government needs, students' preferences were directed toward priority specialties at the tertiary level and in the hospital branch.

Keywords: Choice; Specialty; Students; Medical education; Medicine.

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1. Introduction

Medical specialties are a set of various topics of medicine characterized by differences in the areas of activity, work environment, and variety of patients [1]. Medicine is part of a professional scenario with a wide range of work possibilities due to its different specialties, making doctors' professional practices heterogeneous [2]. Choosing a specialty is a difficult task and a challenge for medical students during their training, given its importance in defining their career; however, this choice can take on an even greater dimension depending on the time invested in training, where each specialty requires at least three years and in some cases, six years, of specialized training. This means that for a medical student to make the most of their medical career, it is crucial to make the right decision about their specialty, the cost involved, and the expectations of social issues related to this specialty [3].

The World Health Organization (WHO) recommends a proportion of 23/10,000 doctors per inhabitant for adequate health services; in Angola, the proportion of doctors per inhabitant is 1/10,000, a number that is still very insufficient in relation to that recommended by the WHO [4]. That number is even smaller, and the situation is more critical, because of the lack of specialists across specialties, with some specialties having just one doctor throughout the country and others without any doctors [5]. Health in Angola is overseen by the National Health System, which defines the main priorities for specialization according to the hierarchy of healthcare provision. The primary level priorities include General and Family Medicine as the first priority, Gynecology & Obstetrics, and

Management in Primary Health Care; the secondary level has a first priority of Pediatrics followed by Gynecology & Obstetrics, General Surgery, and Public Health; and the tertiary level's first priority is Internal Medicine, followed by General Surgery, Pediatrics, Gynecology & Obstetrics, Orthopedics, Anesthesiology, Intensive Care, Public Health, and Health Planning [6].

Career preferences and choices in one's professional life depend on interconnecting factors. These include characteristics of medical schools, such as curriculum, student guidance regarding career and socialization, medical student recruitment, faculty values, and institutional culture; the characteristics of the students, such as age, gender, geography, and year of study; students' values, including marital status, academic performance, and attitudes; career requirements, for example, expected salary, career options, intellectual satisfaction, and workload; perception of characteristics of the specialty, such as availability of vacancies and experience during medical school; and perception of opportunities such as emigration and work abroad [7].

It is important that student choices are in line with the state's main priorities as it defines better residence policies and directs specialties according to the main needs of each country. Students who, at the end of the course, do not have specialty preferences for those specialties of primary care should be directed to reduce the burden that exists at the tertiary level, since the placement of doctors in specialties will become crucial in the coming years. This is especially true due to the lack of certain specialties that could greatly help in solving the main health problems in Angola. The aforementioned study aimed to evaluate the factors that influence the choice of medical specialty, identify the areas of activity preferred by medical finalists, and compare them with the needs of the state.

2. Material and methods

2.1 Study population

The study population included 282 students who were enrolled in the four medical schools (private and public) that teach medicine in Luanda in academic year 2021–2022.

2.2 Data collection instrument

A questionnaire consisting of 16 closed-ended questions was used. The Evaluation Determining Factors in the Choice of Medical Specialty among the Students of the School of Medicine of Valença-RJ [8] was used. Google Forms was used to administer the questionnaires.

2.3 Procedure and data analysis

The data were automatically generated by Google Forms, which is used for data collection in a spreadsheet format and exported to a statistical program. The statistical treatment of the data was supported by the Statistical Package for the Social Service 26 (SPSS 26) software, using descriptive statistics, means and standard deviation (quantitative variables), and absolute and relative frequencies (qualitative variables), and Microsoft Excel was employed to create graphs.

2.4 Ethical and administrative procedures

All students selected for the study were informed about the research objectives and methods of completing the questionnaire. All students selected for the study were informed about the research objectives and methods of completing the questionnaire. This study was approved by the Scientific Board of the Medical School of Agostinho Neto University.

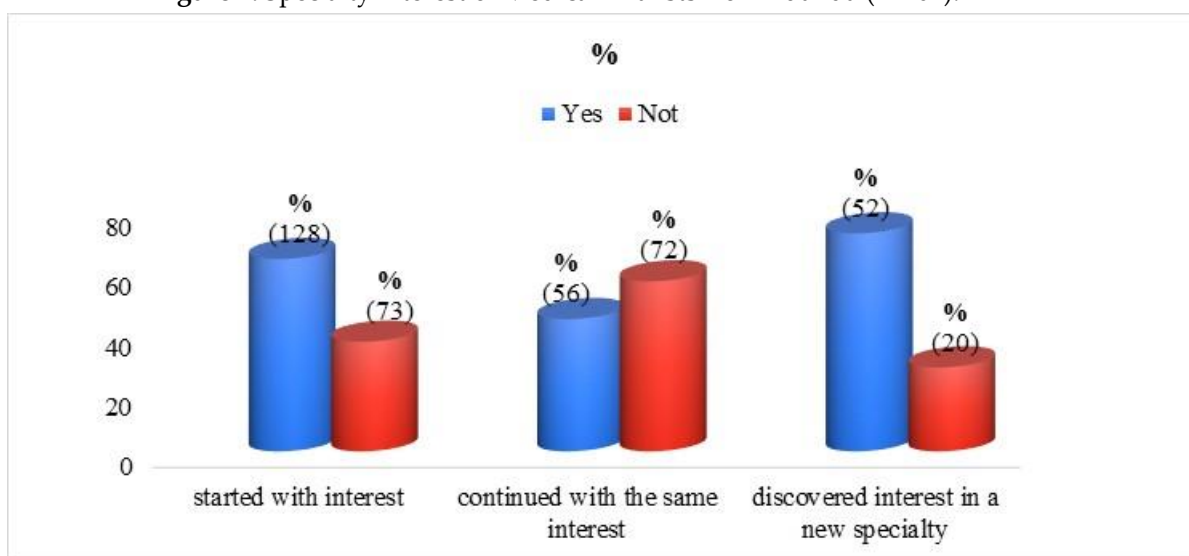
3. Results

Of 201 finalists participated in the study from four different medical schools in the 2021/2022 academic year. Of them, 62.7% (126) were women, the mean age was 28 SD \pm 4.8 and the majority of finalists were single (73.6%). The four institutions that administer the medical course in Luanda participated in our study: 52 (25,8%) from Agostinho Neto University, 45 (22,3%) from Higher Military Technical Institute, 64 (31,8%) from Private University of Angola, and 40 (19,9%) from University Jean Piaget.

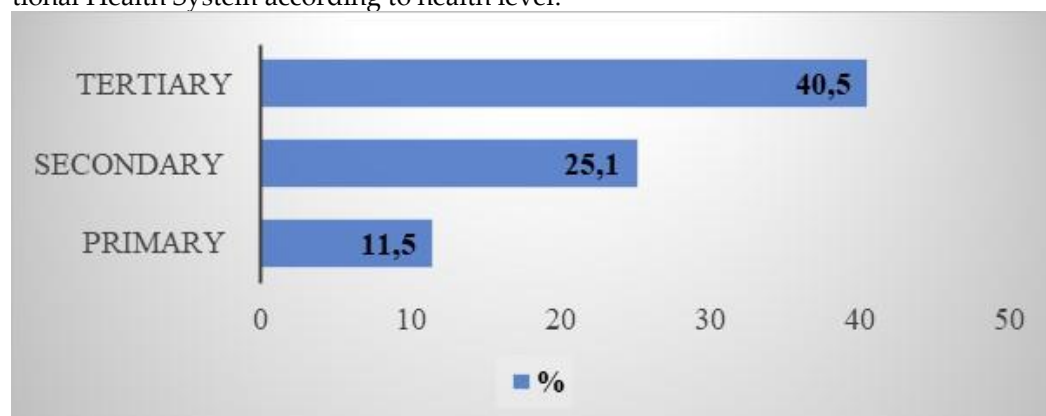
4. Discussion

Angola is a country with only 0.21 physicians per 1000 inhabitants [9], few doctors in all specialties, so the choice of specialties is an important issue not only at an individual level but also for the national health system. In this study, we found that the majority of students already started the course with an interest in a specialty and of these the majority did not continue with the same interest (Figure 1), these results demonstrate the importance of students' contact with different areas of the field. course for the maturation of the choice process. Some data suggests that there may be a discrepancy between the aspirations held by medical students and the actual areas of specialization they enter upon completing medical school [10]. According to Reis et al. [8], a portion of future doctors tend to make the decision on which specialty to pursue, generally in the third or fourth year of graduation, after having contact with the different areas of medicine.

Figure 1. Specialty interest of Medical finalists from Luanda (n=201).

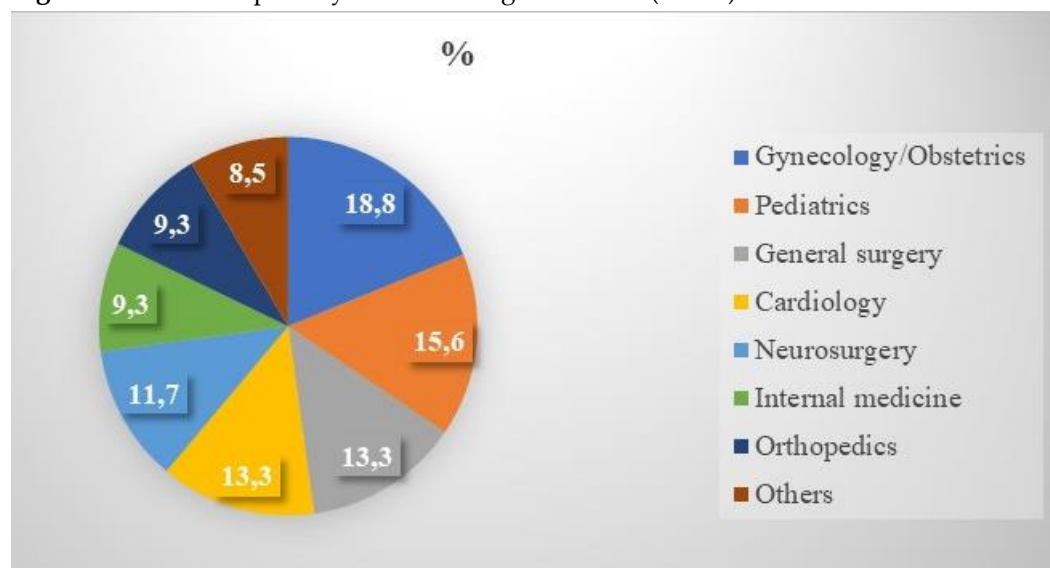


We compared students' preferences with the state's needs and the majority of students prefer higher-level specialties (Figure 2), with only a small part opting for the specialty of General and Family Medicine (Table 1 and Figure 2), despite this be the main priority of our health system and fundamental for the better functioning of the National Health System. We found that the specialties preferred by students were Gynecology/Obstetrics, followed by pediatrics and general Surgery (Figure 3), we believe that this is This is due to the fact that these specialties are considered the major areas of the medical course with greater availability of employment opportunities and consequently greater opportunities for specialization vacancies, in addition to the fact that 75% of curricular internships in our faculties occur at higher level, especially in the main medical and surgical services, making students more familiar with these specialties.

Figure 2. Comparison of student preferences with priority specialties defined in the National Health System according to health level.**Table 1.** New preferred specialty of medical finalists.

New chosen specialty	Frequency	Percentage
Pediatrics	3	5.8
Orthopedics and Traumatology	2	3.8
Oncology	1	1.9
Hematology	1	1.9
Endocrinology	2	3.8
Imaging	4	7.7
Public health	1	1.9
General surgery	5	9.6
Ophthalmology	5	9.6
Intensive care	6	11.5
Occupational Medicine	2	3.8
Otolaryngology	5	9.6
Others	5	9.6
Gynecology and Obstetrics	4	7.7
Cardiology	2	3.8
Nephrology	1	1.9
General and family medicine	2	3.8
Dermatology	1	1.9
Total	52	100

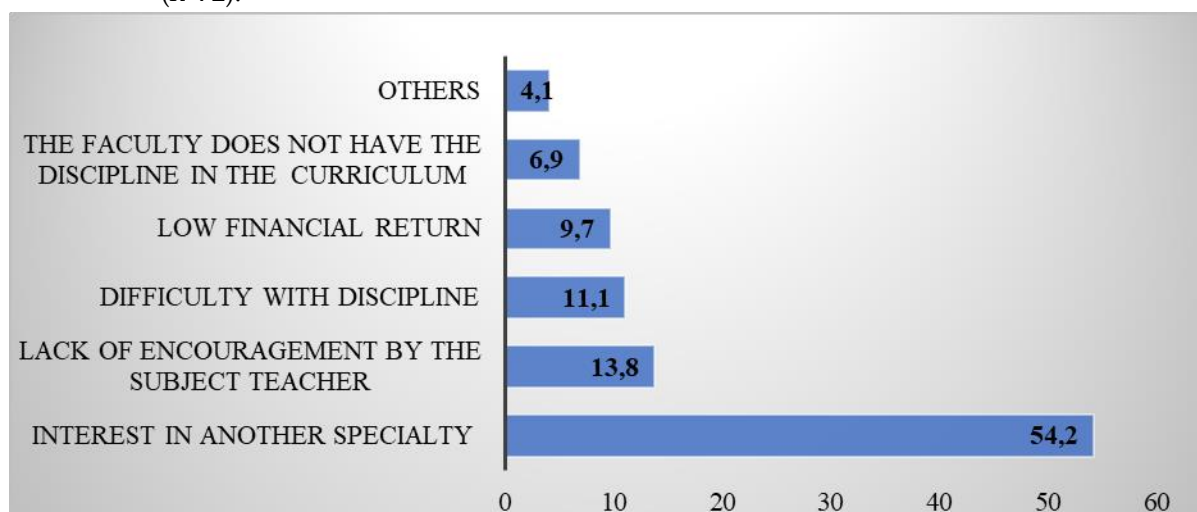
Several studies carried out in Africa also point to these specialties as the most preferred by students. A meta-analysis of data from the last two decades conducted by Bajunirwe et al. [10] on specialized career aspirations among medical students in sub-Saharan Africa, found that General Surgery, Medicine Internal, Gynecology/Obstetrics and Pediatrics were the most preferred by students, and only 2.7% of students chose Family Medicine [10]. This is due to the fact that Africa has historically not had family medicine doctors, but several African countries are recognizing the impact that this specialty can have on improving the provision of care and moving towards achieving universal healthcare [10].

Figure 3. Preferred specialty when starting the course (n=128).

Medical education programs in Africa do not give importance to family medicine or preventive medicine, and even endemic diseases are often not part of the teaching program [12]. With this work we intend to draw the attention of the academic and governmental community to improving the educational system and creating flows that attract newly trained doctors to the primary level of healthcare. We found that students who had started the course with some interest in the specialty were influenced by their interest in the specialty (Figure 4) but the second most cited factor for choosing a specialty was admiration for a particular teacher or professional (Figure 4). This is an expected result, we know that teachers have a great positive or negative influence on students, proof of this is that the influence of teachers was also one of the main reasons for changing the initial choice to a new one (Figure 5). Although admiration for a teacher or other professional is not the factor most highlighted by students, it is above individual skills, family influence and financial return (Figure 4).

Figure 4. Factors that influenced Specialty choice when starting the course (n=128).

Figure 5. Factors that led finalists to discontinuing their interest in the initial specialty (n=72).



Studies out carried by several authors have found that affinity for the specialty was the factor most highlighted by students [7, 8, 11, 12], and the second most highlighted fac-tor was admiration for a teacher or other professional [8]. The relevance of the present work is since the specialty preferences of medical students determine the composition of the medical workforce in the country, taking into account that these 4 col-leges that participated in the study are the oldest and most prestigious, receiving students from all over the country and training doctors for the entire country. This study can help to define better career guidance, health planning, and health policy formulation. It is also important to emphasize that the information obtained in the present work may contribute to the production of scientific knowledge about the professional expectations of students, the main factors related to this choice, and whether such factors are in accordance with the healthcare needs of the population and the priorities defined by health systems.

5. Conclusion

Student preferences are directed toward specialties that are considered major areas of the course. Specialties such as General and Family Medicine were among the least commonly chosen, despite being a priority for specialization. The teacher plays a fundamental role in both the preference and non-preference for a specialty.

6. Limitations

- Virtual communication with study participants for better clarification on completing the questionnaire led to some students not participating in the study, but this did not become an obstacle to carrying out the study;
- The lack of sufficient bibliographies that address the aforementioned topic. In particular in Angola, we did not find studies that address the specialty preferences of medical students, which would have influenced a stronger and more inclusive discussion;
- Most of the studies found do not make a comparison between the priorities of national health systems and the aspirations of students regarding the choice of specialty.

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Supplementary Materials: None.

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