

OVERVIEW OF STUDENT SPECIALIZATION FACULTY OF MEDICINE, UDAYANA UNIVERSITY CLASS OF 2020-2021

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ABSTRACT

Medical Education is someone who studies a particular field of science or field of medical science in charge of developing, transforming, and disseminating technology in the field of medicine through research, education, and community service based on their expertise and education. The choice of a doctor's career is influenced by many factors that influence each other. The goal of this study is to find out the description of specialization and to discover the factors that influence the selection of specialization areas for students of the Faculty of Medicine, Udayana University, Class of 2020-2021. This study used an observational descriptive method with a cross-sectional approach research design with 85 respondents. Data collection using questionnaires and data analysis using *Statistical Product and Service Solution* (SPSS). Of the 85 respondents, 95.3% of respondents chose a clinician career and 4.7% of respondents chose a non-clinician career. Most of them chose clinician careers, namely other specialists 48.3%, followed by basic specialists 43.5% and support specialists 3.5%. The career that is most in demand by students of the Medical Education Study Program (PSPD) of the Faculty of Medicine, Udayana University batch 2020-2021 is the career of clinicians, especially as other specialists. There was no significant relationship between parents' socioeconomic status, parental education, region of origin, and final Cumulative Achievement Index (GPA) and students' career interests, but career selection motivation was a related factor.

Key words: Clinical career, non-clinical career, specialization.

INTRODUCTION

Medical education is an individual who studies a specific field or the field of medicine, tasked with developing, transforming, and disseminating technology in the field of medicine through research, education, and community service based on their expertise and education.¹ Medical education consists of two stages: the pre-clinical phase and the clinical phase. During the pre-clinical phase, students are equipped with medical knowledge or basic attitudes of medical education, which will later be developed in the clinical phase when dealing with actual patients. After completing the pre-clinical phase, there is the clinical phase, during which students, known as Co-Assistants (Co-Ass) or junior doctors, acquire knowledge and are placed in practical settings such as hospitals. In the clinical phase, a doctor can choose to pursue non-clinical fields such as administrative assistance, hospital

management, consultancy, medical education, or other health professions. Alternatively, they can opt for clinical fields, either as specialists or non-specialists².

The distribution of healthcare professionals is a global health system issue across countries. Disparities exist in terms of the choice of medical specialization among doctors, with some opting for primary care over specialization. Additionally, there is uneven distribution of doctors.³ In the United States, for instance, it was reported that 62.6% of doctors were specialists in 2013.⁴ According to the Indonesian Health Human Resources Development and Empowerment Agency, in 2018, approximately 51.8% of doctors became specialists, while 48.2% served as primary care physicians in Indonesia.⁵

The selection of a medical specialization is a crucial decision that significantly impacts a doctor's future life. The importance of choosing a medical specialization is underscored by the multitude of options available.⁶ The

process of selecting a specialization begins during the pre-clinical phase and continues until the completion of clinical rotations.⁷ Medical students, when exposed to clinical environments, make career specialization choices that are followed by selecting a residency program in their final year of medical school.⁸ The multitude of specialization options can lead to confusion for medical students in planning their future careers. This confusion may result in an imbalance in the selection of specializations that medical students find appealing.⁹

The selection of a medical specialization is influenced by numerous interconnected factors. Interest is a primary factor in choosing a specialization. Additionally, several other factors play a role in a doctor's choice of specialization, such as the balance between work schedules, potential income from the career, socio-economic status or parental income, parental education, GPA, and characteristics of the hometown.^{2,10} The author is interested in examining the overview of specialization preferences and the factors influencing the choice of specialization among medical faculty students.

HEADING

Stages of Medical Education

The education of doctors can be divided into two major components: academic education and professional education. In the medical undergraduate program, there is an initial stage known as pre-clinical, during which students are taught basic attitudes, skills, and the science of medical education. Professional education consists of doctor professional programs such as Co-Ass or junior doctors, who will later rotate through different departments in hospitals or undergo clinical training in areas such as pediatrics, surgery, internal medicine, and so forth.¹¹

Factors Affecting Interest

The factors influencing a doctor's career choice hold significant importance, as they can provide new perspectives related to the aspirations desired by a doctor within their profession. This can contribute to a deeper job satisfaction and enhance the quality of patient care.¹² Factors influencing the interest in selecting a specialization field are obtained from various previous research results, such as socio-economic status or parental income, parental education, GPA (Grade Point Average), and characteristics of the hometown.^{2,13}

Description of Specialization

Specialization refers to the mastery of expertise in a particular field or area within medical practice.¹⁴ Specialized medical services are provided by dedicated healthcare professionals, primarily doctors. In this context, it is essential to outline specific fields to understand the distinct functions of each, even though they share common goals. Some specialized fields include pediatricians, neurologists, ophthalmologists, psychiatrists, etc.¹⁵ There is an uneven

distribution of specialization interests globally, as seen in Indonesia. For instance, among medical students in Bandar Lampung, pediatric specialization is the most preferred as the first choice (20%). For the second choice, obstetrics and gynecology (obgyn) are the most popular (23%), while internal medicine occupies the position of the third most preferred choice (21%).¹²

OBJECT AND METHOD

This study is a qualitative research utilizing a descriptive observational method with a cross-sectional research design because the author aims to describe the overview of specialization preferences among medical faculty students based on previously occurring events. Data were obtained from primary sources, namely questionnaires distributed to students of the Faculty of Medicine, Udayana University, belonging to the 2020-2021 academic year.

The research was conducted in 2023 within the premises of the Faculty of Medicine, Udayana University (pre-clinical phase). The target population consisted of all students at the Faculty of Medicine, Udayana University. The accessible population included all students (PSPD) of the Faculty of Medicine, Udayana University, who were enrolled in the 2020-2021 academic year. The sample was selected based on inclusion and exclusion criteria, resulting in a total of 85 participants. Inclusion criteria involved students actively enrolled in the Faculty of Medicine, Udayana University, in the 2020-2021 academic year. Exclusion criteria included students who were unwilling to provide informed consent and those with incomplete questionnaires.

The questionnaire serves as a research tool for collecting data for each variable. The data collection method involves distributing an online questionnaire in the form of a Google Form, and the participants will respond to it. The data processing in this study involves several stages, including editing, coding, and data entry. Subsequently, the data will be analyzed using *Statistical Product and Service Solution* (SPSS) and as well as univariate analysis.

RESULTS

From all respondents who met the inclusion criteria in the Faculty of Medicine, Udayana University, enrolled in the academic year 2020-2021, characteristics of the respondents were obtained as follows (**Table 1**) based on the socioeconomic status of parents. There were 10 individuals (11.8%) classified as lower-middle status (<Rp 2,600,000/month), 20 individuals with middle status (Rp 2,600,000-6,000,000/month) (23.5%), and 55 individuals with upper-middle status (>Rp 6,000,000/month) (64.7%). Parental education, both fathers and mothers, was categorized into two groups: low and high. The education level of fathers with high status was 80% of the 68 respondents, and mothers with high education status were 74.1% of the 63 respondents. Seventeen fathers (20%) and 22 mothers (25.9%) had low education status. The hometown was divided into two categories: rural and urban. A total of 69 individuals came from

urban areas (81.2%), while the remaining 16 individuals came from rural areas (18.8%). Regarding the Grade Point Average (GPA), 63 individuals (74.1%) achieved cum laude status (3.5-4.00), and 22 individuals opted for a very good GPA (2.75-3.49) (25.9%).

Out of 85 respondents who chose a career they were interested in pursuing, 81 individuals opted for a clinical profession (95.3%), while the remaining 4 individuals chose a non-clinical path (4.7%) (Table 2). The desired specialized career among the respondents included 37 individuals choosing a basic specialist (43.5%), 3 individuals opting for a supporting specialist (3.5%), 41 individuals selecting other specialists (48.3%), and the remaining 4 individuals did not choose a specialization (Table 3).

Table 1. Characteristics of Students at the Faculty of Medicine (PSPD), Udayana University, Class of 2020-2021

Karakteristik (n=85)	Frekuensi	Proporsi (%)
Status sosioekonomi orang tua		
Menengah ke bawah (<Rp 2.600.000/bln)	10	11,8
Menengah (Rp2.600.000–Rp6.000.000/bln)	20	23,5
Menengah ke atas (>Rp 6.000.000/bln)	55	64,7
Pendidikan Ayah		
Rendah (<SMA)	17	20,0
Tinggi (>SMA)	68	80,0
Pendidikan Ibu		
Rendah (<SMA)	22	25,9
Tinggi (>SMA)	63	74,1
Daerah Asal		
Desa	16	18,8
Kota	69	81,2
IPK		
Amat baik (2,75-3,49)	22	25,9
Cum laude (3,5-4,00)	63	74,1

Tabel 2. Distribution of respondents based on the chosen career preferences among students (PSPD FK) at Udayana University, Class of 2020-2021

Kategori	Frekuensi	Proporsi (%)
Klinisi	81	95,3
Non Klinisi	4	4,7
Total	85	100%

Tabel 3. Distribusi responden berdasarkan karier spesialis yang diminati pada mahasiswa (PSPD FK) Universitas Udayana Angkatan tahun 2020-2021

Kategori	Frekuensi	Proporsi (%)
Spesialis dasar	37	43,5
Spesialis penunjang	3	3,5
Spesialis lainnya	41	48,3
Tidak memilih spesialis	4	4,7
Total	85	100%

DISCUSSION

The total sample size in this study is 85 respondents, all of whom meet the inclusion criteria, making them eligible participants. In a previous study at the Faculty of Medicine, UIN Syarif Hidayatullah Jakarta, it was found that 62.3% of respondents had a high socioeconomic status, indicating a significant number of medical students with parents of high socioeconomic status. This is likely related to the lengthy education required to become a doctor and the high cost of the Medical Doctor Education Program (PSPD).⁴ Regarding the education level of both parents, they are categorized into two groups: low and high. Consistent with Alfairuzi's research at the UIN Syarif Hidayatullah Jakarta Faculty of Medicine, it was found that the respondents were predominantly characterized by a high level of parental education, accounting for 82.8%.⁴ In contrast, the results differed from a previous study conducted by Khusnayni (2018), where it was found that parents of respondents (PSPD FK) with education levels ranging from basic to upper secondary education constituted 58.9%. The high level of education includes diploma to Ph.D. or Strata 3 education.²

The place of origin is divided into two groups: rural and urban. In a previous study at the Faculty of Medicine, State Islamic University Syarif Hidayatullah Jakarta, it was found that 85% of respondents did not come from rural areas.² This aligns with the findings of an earlier study by Kawamoto (2015), which indicated that 82% of respondents did not come from rural areas.¹⁶ Regarding the GPA variable, a previous study at the Faculty of Medicine, Airlangga University, found that a high GPA dominated, accounting for 87.8%.

However, the categorization of final GPA in the study did not explicitly explain the differences in the GPA range, making it unclear.¹⁷ This contrasts with the research conducted by Khusnayni (2018) at the Faculty of Medicine, State Islamic University Syarif Hidayatullah Jakarta, where an excellent GPA overwhelmingly dominated at 98.1%.²

In a previous study at the Faculty of Medicine, State Islamic University Syarif Hidayatullah Jakarta, it was found that the majority of students chose a career as clinicians, accounting for 95.4%, compared to 4.6% who chose non-clinical paths.⁴ Consistent with previous research on Internship Program for Indonesian Doctors (PIDI) participants in DKI Jakarta, it was found that the majority chose a career as clinicians, reaching 77.3%.¹⁸ This is in line with research from India, which showed that a significant number of respondents chose a career as clinicians.¹⁹ The high preference for a clinical career may be influenced by the perception that clinical doctors have the opportunity for direct interaction with patients. This can provide a sense of satisfaction or high personal fulfillment and may be influenced by expectations for higher income or earnings.²⁰

The specialization preferences differ from the findings of a previous study by Khusnayni (2018) at the Faculty of Medicine, State Islamic University Syarif Hidayatullah Jakarta, which reported a high preference for careers in basic specialties, specifically internal medicine specialists (12.1%), followed by surgical specialists and pediatric specialists.² This is similar to the research by Alfairuzi (2018), which found a high preference for basic specialty careers, particularly internal medicine specialists (15.6%), followed by obstetrics-gynecology specialists and pediatric specialists.⁴ In a previous study in Ireland, at the Medical University of Bahrain, it was found that the majority chose basic specialties, with surgical specialists being the most preferred (26.5%), followed by internal medicine specialists and pediatric specialists.²¹

CONCLUSIONS AND SUGGESTIONS

Overview of career preferences among students (PSPD FK) at Udayana University, Class of 2020-2021, involving 85 respondents, indicates that the majority prefer clinical careers (95.3%), with the most significant interest being in specialization. Choosing a career as another medical specialist, at 48.3%, is the most popular choice, with the highest interest in plastic surgery. Motivation is a significant factor influencing career preferences among students (PSPD FK) at Udayana University, Class of 2020-2021. Motivation, interconnected with career interests, includes the influence of individuals who motivate the choice of the profession (family, lecturers, doctors, etc.). The research results highlight factors influencing career preferences among students (PSPD FK) at Udayana University, Class of 2020-2021, based on parental socioeconomic status, parental education, hometown, GPA, and interconnected motivation. The study reveals that motivation for career choice is a correlated factor.

The author suggests that future research exploring similar topics should broaden the scope to obtain accurate results, preferably by increasing the number of respondents and extending the data collection period to gain a broader understanding of specialization preferences in the Medical Doctor Education Program. Additionally, the author hopes that future researchers can explore the latest factors and motivations influencing career interests in subsequent studies.

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