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Review Article

### THE PROPORTION OF MEDICAL STUDENTS WHO FIND STUDYING DIFFICULT IN RELATION TO PARTICULAR SUBJECTS: A CROSS- SECTIONAL STUDY

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**Abstract:**

**Objective:** The current study aimed to outline the perceived rate of study difficulty associated with specific subjects among medical students.

**Methods:** Researchers assessed study difficulties of special subjects among medical students at a single point of measurement in this descriptive cross sectional study. Cross-sectional design is suitable as it provides researchers with large set of data during a short period. It also gives reliable results and enable researchers to assess exposure and outcome simultaneously. Participants were first-year medical students at the undergraduate level in the United Kingdom. Two hundred students were chosen at random, with a class of 12–15 pupils serving as the primary selection unit. All volunteers must be at least 18 years old and free of self-reported cognitive abnormalities, mental illness, or any other impairment that would make comprehending and completing the study questionnaires problematic.

**Results:** Study included 325 participants of fifth year medical students. Cardiology was the most favorite subject among study participants (n= 139, 42.8%) followed by orthopedic (n= 118, 36.3%). Half of participants agreed that teachers are explaining the concept in medical college (n= 163, 50.2%). Moreover, more than third of study participants were neutral (n= 129, 39.7%) about teachers are taking initiatives to help choose subjects in medical school. Participants answered that cardiology is the most difficult subject for them in medical school (n= 136, 41.8%) followed by gynecology (n= 94, 28.9%). The most frequently reported strategy was using YouTube videos (260, 80%). Choosing a subject that the student was not confident in affected his/her grades as reported by study participants (n= 230, 70.8%). Half of participants reported that they would not feel pressure and that medical school is not for him/her (n= 157, 48.3%). On the other hand, 93 participants had that feeling (28.6%). Furthermore, 35 participants thought that leaving medical school would be a better option (10.8%).

**Conclusion:** Results showed that cardiology is the favorite subject among study participants and the most difficult one. They had good perception about teachers help in choosing a subject they are not confident in. Study participants used YouTube lectures to help with study difficulties. Choosing a subject that the student was not confident in affected his/her grades as reported by study participants. Half of participants reported that they would not feel pressure and that medical school is not for him/her. Furthermore, some of participants thought that leaving medical school would be a better option (10.8%).

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**INTRODUCTION**

It is common for students to attribute their judgments in one topic to their insights into the problems they have been having in another, but these insights have neither been proven nor do they create the sense of being the main driver of navigation in the student's future [1].

Researchers have compiled a summary of the many factors that seem to influence students' decisions, and some patterns have emerged [1]. All of the subject's friends, instructors, and parents may have an impact, as can the subject's own joy, perceived ease, difficulty, and skill [2]. While these findings provide lively engagement, further study is needed since prior studies have shown that students choose to ignore some courses because they are too challenging for them [3]. Therefore, although we know that certain topics are seen as more challenging than others by students and that subject challenge seems to alter the direction, the practices that support this link at present do not appear to be well described [4].

The pre-clinical years of medical school are often considered as some of the most challenging of any specialized training program due to the long length of the curriculum and the emotional demands it places on its students [2]. There has been a lot of focus in recent decades on the pain that people endured throughout this era [1]. For quite some time, scholars have argued about whether or not varying levels of difficulty across courses is causing students to avoid studying some "critical" subjects [4]. Both teachers' recommendations and school regulations influenced the courses students choose to take [3]. Student performance and outcomes evaluations should take into account medical students' anatomical knowledge and training [5]. Finding out how challenging each subject was for medical students is the first and most important step in assessing their education [6]. Students in the medical field may see a decline in their grades because they find it difficult to concentrate and

remember the material for particular classes [7]. Last but not least, there is the risk of long-term persistence, which may have unfavorable consequences for medical efficiency, patient safety, and health-care systems overall [8]. Anxiety over one's future and how well one does on final exams increases in tandem with one's stress levels [9]. The current study aimed to outline the perceived rate of study difficulty associated with specific subjects among medical students.

**METHODS:**Study design

Researchers assessed study difficulties of special subjects among medical students at a single point of measurement in this descriptive cross sectional study. Cross-sectional design is suitable as it provides researchers with large set of data during a short period. It also gives reliable results and enable researchers to assess exposure and outcome simultaneously.

Study setting

Medical college in the United Kingdom.

Participants, sample and sampling

Participants were first-year medical students at the undergraduate level in the United Kingdom. Two hundred students were chosen at random, with a class of 12–15 pupils serving as the primary selection unit. All volunteers must be at least 18 years old and free of self-reported cognitive abnormalities, mental illness, or any other impairment that would make comprehending and completing the study questionnaires problematic.

Data collection

The participants were given a questionnaire, which identified their demographics and aim related perceptions. This cross-sectional study measured the perception of students for choosing subjects as the independent variable and their grades in the exam being the dependent variable.

Statistical analysis

Responses were processed using the SPSS software. Continuous variables are presented as means and standard deviation while categorical data are presented as frequency and percentages.

Ethical considerations

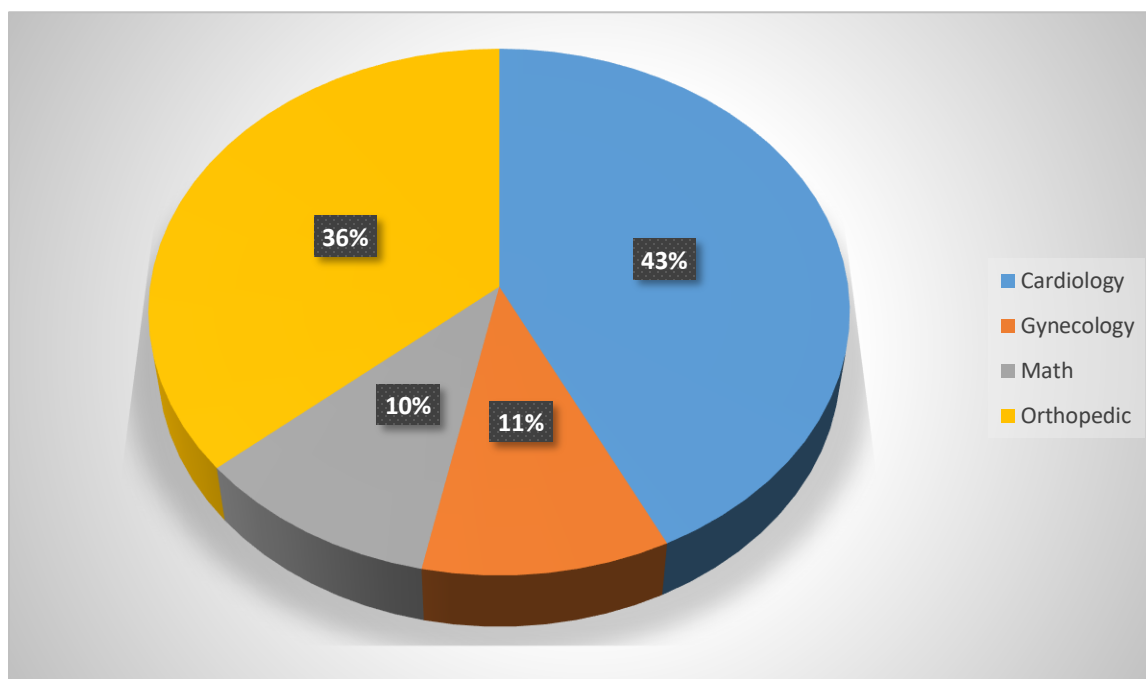
In the current research, primary data collection is incorporated, thereby requiring ethical considerations. The proposal of the research design was submitted to the ethics committee of the University such that it meets the standards previously set. After the ethical approval, informed consent from participants by sharing with them the aims and objectives of the research was gathered. To maintain anonymity, the responses of the participants for the questionnaires were sealed and opened by the principal investigator. Furthermore, the responses were not manipulated to meet the research objectives, thereby attempting to eliminate bias from the study.

Expected outcome

Given that undergraduate young doctors are the future medical practitioners on whose hands the physical and emotional health of the public rests, it is critical that the subject selections they pick are based on their own abilities and not under the guise of another individual. It is with the help of this study that a clear role of the teachers, as well as students in regards to choosing subjects based on their perception, will be highlighted, which will be key in understanding their future roles in the medical field.

**RESULTS:**

Study included 325 participants of fifth year medical students. Participants responded to all questionnaire questions. Cardiology was the most favorite subject among study participants (n= 139, 42.8%) followed by orthopedic (n= 118, 36.3%). Figure 1 shows the distribution of favorite subject among participants.

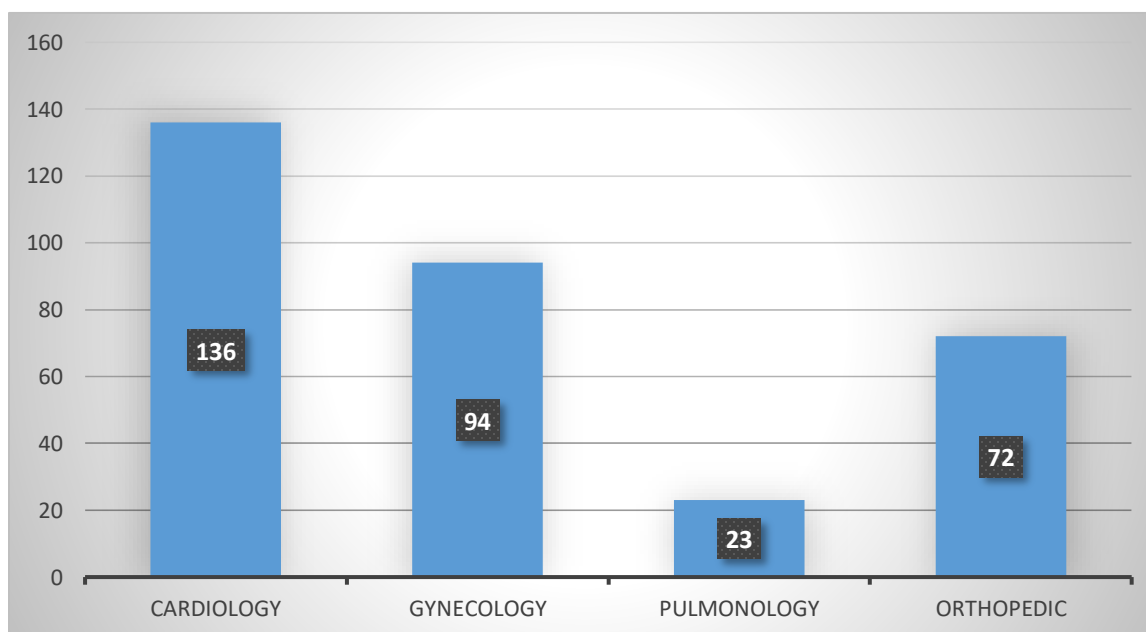


**Figure 1: Distribution of favorite subject among study participants**

Half of participants agreed that teachers are explaining the concept in medical college (n= 163, 50.2%). Moreover, more than third of study participants were neutral (n= 129, 39.7%) about teachers are taking initiatives to help choose subjects in medical school. Participants either agreed (n= 122, 37.5%) or were neutral (n= 111, 34.2%) about knowing the perceived impact of not being able to learn difficult subjects in future professional life (Table 1).

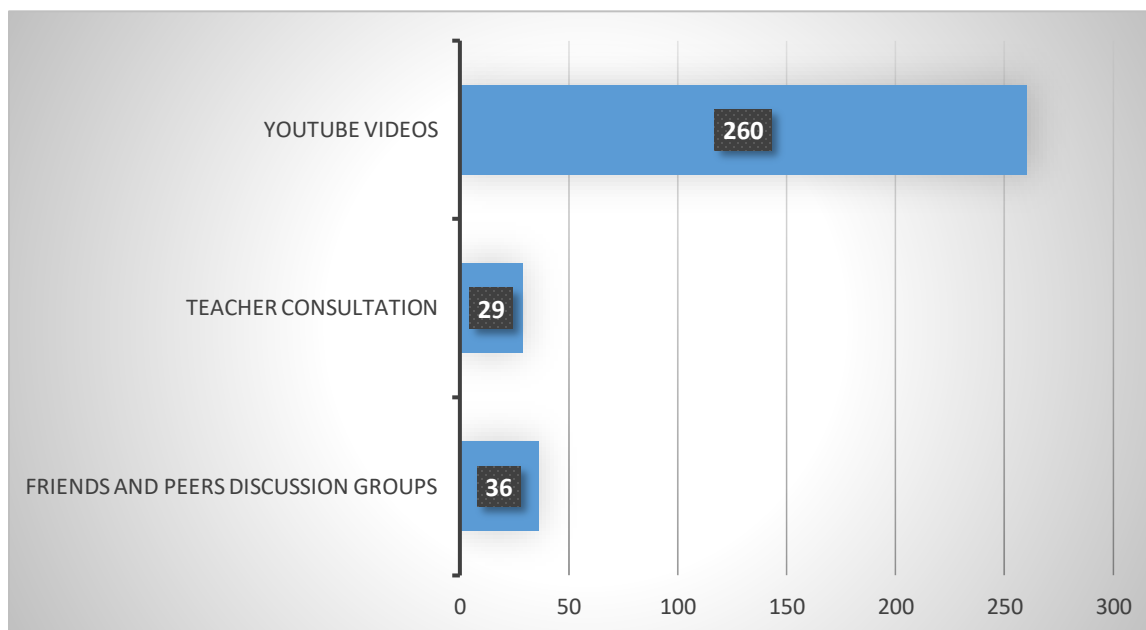
<b>Table 1: Participants' responses to questionnaire items</b>					
Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Are the teachers able to explain the concepts in medical college?	6 1.8%	23 7.1%	82 25.2%	163 50.2%	51 15.7%
Are the teachers taking the initiative to help choose subjects in medical school?	41 12.6%	63 19.4%	129 39.7%	76 23.4%	16 4.9%
Do you know the perceived impact of not being able to learn difficult subject's in future professional life?	6 1.8%	41 12.6%	111 34.2%	122 37.5%	45 13.8%

Participants answered that cardiology is the most difficult subject for them in medical school (n= 136, 41.8%) followed by gynecology (n= 94, 28.9%) as presented in figure 2. Most of participants reported that they are able to identify and outline the subjects that they are facing difficulties in medical school (n= 231, 71.1%). Participants were asked whether their teachers are trying to persuade them to choose subject that students are not confident in. About two thirds of participants answered no (n= 210, 64.6%) while 53 participants answered yes (16.3%). Moreover, about two thirds of participants intended to cope with subject difficulty (n= 210, 64.6%) while 58 participants didn't (17.8%).



**Figure 2: Frequency of difficult subject among study participants**

Participants reported using different strategies to learn subjects in a much easier way. The most frequently reported strategy was using YouTube videos (260, 80%). Other reported strategies are presented in figure 3.



**Figure 3: Participants' strategies to learn difficult subjects**

Participants were asked to assess strategies they used to learn difficult subjects. Their assessment is summarized in table 2.

<i>Table 2: Participants' assessment to strategies used to learn difficult subjects</i>					
Subject/Assessment	Bad	Cannot say	Good	Very bad	Very good
Friends and peers discussion groups	0	6	0	0	30
Teacher consultation	6	0	6	5	12
YouTube videos	12	11	56	0	181

Choosing a subject that the student was not confident in affected his/her grades as reported by study participants (n= 230, 70.8%). Half of participants reported that they would not feel pressure and that medical school is not for him/her (n= 157, 48.3%). On the other hand, 93 participants had that feeling (28.6%). Furthermore, 35 participants thought that leaving medical school would be a better option (10.8%). By contrast, 217 participants thought it would not be a better option (66.8%).

### DISCUSSION:

Finding out what makes for successful academic achievement is a constant struggle for those working in the medical education profession. Raising students' performance has long been a priority in the field of education. Stakeholders in medical education are

interested with student outcomes because these outcomes represent a wide range of institutional and stakeholder interests.

If a school is serious about producing competent physicians [10] and caring for its students' well-being and future success, it must take steps to determine the

root reasons of academic challenges and poor performance.

Grade point average is one possible measure of how well a student is doing in school. Many elements, including those of a psychological, social, personal, and environmental nature [10-11], influence students' success in the classroom. Although these characteristics have a significant impact on student achievement, they vary greatly among countries and people. Inadequate learning abilities, inability to manage study load, and socioeconomic issues are all linked to low academic performance [10-12]. Stress, sadness, and anxiety, along with disturbed sleep, have all been associated to worse academic performance [10, 11, 13-15]. Although there is some inconsistency across research [12], it is generally accepted that these elements are extracurricular in nature [16].

Poor academic performance has been linked to a number of factors, according to research conducted in Saudi Arabia, including a lack of time for independent study, an excessive workload, a lack of English proficiency, a lack of sleep, feelings of anxiety and stress, ineffective teaching methods, and health issues.

Most medical students ranked rivalry with their peers as more difficult than learning English. Difficulty in the subject matter came up at number three, behind a lack of informative resources and a substantial quantity of assigned work. The lowest-ranked issues [17-18] were a lack of time for social activities and stress linked to classes.

Studies on Saudi medical students indicated that students who were less proficient in English were more likely to skip reading the required textbooks and had worse GPAs [18, 19]. Individual access to Internet resources also has a substantial impact on academic performance [19].

## CONCLUSION:

Results showed that cardiology is the favorite subject among study participants and the most difficult one. They had good perception about teachers help in choosing a subject they are not confident in. Study participants used YouTube lectures to help with study difficulties. Choosing a subject that the student was not confident in affected his/her grades as reported by study participants. Half of participants reported that they would not feel pressure and that medical school is not for him/her. Furthermore, some of participants thought that leaving medical school would be a better option (10.8%).

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