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STRESS AND ANXIETY IN MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY AT YEREVAN HAYBUSAK UNIVERSITY

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Abstract. Dealing with these challenges can make the aspect of pursuing and completing a medical education, a very stressful and anxious one. This study aims to identify the prevalence of stress and anxiety among medical students and to determine the likely factors that contribute to exam anxiety among the population. All students who took part in the survey were students of the general medicine department at Yerevan Haybusak University, Armenia. The experiment was conducted by using the STABS questionnaire and then considering variables such as age, gender, year of medical education, and nationality. As per the STABS criteria, students who scored 160 and above, have test anxiety that affects their academic performance and their emotional well-being. The results from the survey showed that out of 103 participants, 21 survey takers (20.3%) fit this criterion and hence do indeed struggle with test anxiety.
Keywords*:* test anxiety, stress, medical students, survey, Armenia

Introduction

Anxiety, although not as debilitating as other mental health conditions such as depression [3], is usually closely linked to stress, and if not addressed usually manifests as complications in emotional and behavioral problems [1-4]. Reports have shown that as much as 66.9% of medical undergraduates suffer from anxiety and its prevalence varies from country to country. Relatively low rates of anxiety have been reported in medical students from countries like Brazil (37.2%) and Great Britain (31.2%) [5] while higher rates were reported in countries like Egypt (73%) [6] and Nepal (41.1%) [7]. Severe anxiety has also been shown to impair goal-directed attention and concentration [8], working memory[9], and perceptual motor function[10], all of which are necessary for any physician in training or medical student to assess and diagnose patients with efficacy and accuracy.

Test anxiety (TA) is a situation-specific trait that refers to the anxiety conditions that happen during an examination period. The symptoms of test anxiety can vary in intensity and manifestation, but common symptoms felt include fear, dread, restlessness, or fear of impending doom. Additionally, environmental factors like a highly competitive academic atmosphere, excessive emphasis on grades, and time pressure can further exacerbate anxiety levels for medical students.

The consequences of TA can affect various aspects of an individual's academic performance, some of which would include decreased test scores, and inability to demonstrate one's true knowledge and abilities resulting in poor self-esteem, feelings of inadequacy, and stunting professional growth [1]. Recognizing the signs and patterns of TA can help educators, peers, and individuals to implement healthy strategies and support systems to tackle the consequences as they come and go.

Methods

Participants who were interested to do the survey were approached at the university and after explaining the purpose and steps of the survey and after they agreed and consented to do the survey,

the questionnaire consisting of 48 statements was handed over to them to fill. Each statement had an appropriate response to it that the participant would have to fill out and each response was assigned a score that would be tallied out in the end. All information collected besides the differentials (age, gender, year of study, and nationality) was kept confidential and only collected to let each participant know of their result. The data sample collection took 2 weeks and incomplete or biased surveys were discarded from the original survey entries.

The inclusion category for students to take part in this survey were: (1) they were students of Yerevan Haybusak University (2) they were currently part of the general medicine department of the university (3) Had a good understanding of the English language as translations of the questionnaire were unavailable. The scoring of each survey was done manually and double-checked to ensure that miscalculations and mistakes were limited. After each survey was double-checked and assigned its score, other information such as age, gender, year of study, and nationality were considered and the surveys were grouped into each category, and data from each category was recorded. The surveys that scored 160 and above were then separated and then categorized based on the differential information provided so that it could be compared with the rest of the survey sample.

Results

Twenty-one surveys out of the 103 that were checked and filtered out were categorized into another subgroup called the TA group as they all had a score of 160 or above which meant that the survey participants were most likely to have a problem with TA. This brings the prevalence of TA in the survey sample to 20.3%.

The age range of the participants ranged from 17-27 with the mean age being 22. Coincidentally it was also the age group with the greatest number of participants and had the highest number of members from the TA group (6 out of the 21 surveys that were separated from the main survey sample). Interestingly neither one of the age groups 18, 26 and 27 had members who fell into the TA group and even though we had only 2 members in the age group 17, both members were part of the TA group. Table.1 shows the number of participants in each group and the number of those who were part of the TA group, which indicates the prevalence of TA on the variation of age among survey takers.

Table.1 Age of participants

AGE GROUP	Total number of participants from that age group	Number of participants from that age group who were part of the TA group
17	2	2
18	2	None
19	3	1
20	16	4
21	19	1
22	28	6
23	15	2

24	9	2
25	5	3
26	3	None
27	1	None
TOTAL	103	21

When we compared the data from both genders, which included the participation of 54 female and 49 male students. We saw that the female population had more members who were part of the TA group (13). Although this didn't mean that the male population didn't have a similar result as 8 members from the male population also were part of the TA group which indicates that it is more likely that the female population is more prone to being affected by TA but the reasons behind which will be needed to be investigated further. Attached below is a graph that depicts the number of male and female participants compared with their numbers in the TA group.

Figure 1. Number of TA group participants by gender

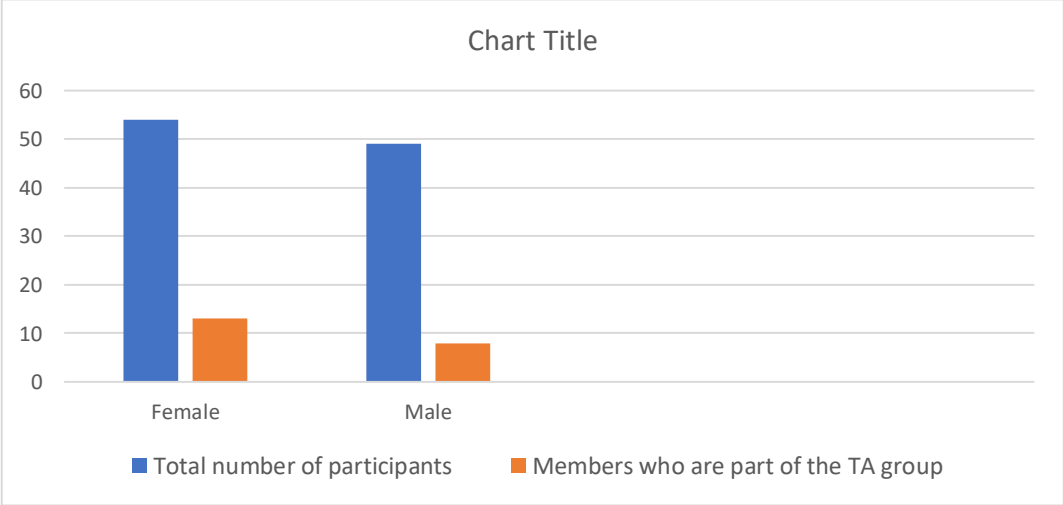


Table 2. Length of study (years) for participants

YEAR	Number of participants from the survey	Number of members in the TA group
1st Year	15	8
2nd Year	6	None
3rd Year	17	1
4th Year	36	5
5th Year	25	5
6th Year	4	2
Total	103	21

Table 3. Proportions of participants by nationality

Nationalities	**Number of Participants from each nationality that took part in the survey**	**Number of participants from each nationality in the TA group**
Indian	87	13

Iranian	5	3
Nigerian	4	4
Egyptian	3	1
Armenian	1	None
Ghanian	1	None
Malaysian	1	None
Palestinian	1	None
Total	103	21

Another differentiating aspect of our survey takers was their nationalities as most medical students in Armenia are foreign nationals, this was reflected in the nationalities that took part in the survey which included nationals from countries such as India, Nigeria, Egypt, Malaysia, Ghana, Iran, and Palestine. Most of the survey participants were Indian and so were most of the TA group members. All nationals from Nigeria were included in the TA group as per the results obtained from their respective surveys. Listed below in table.3 is a list of all the nationalities that took part in the survey and the number of participants of each nationality that were part of the TA group.

Discussions and limitations

Having considered all the data was collected and compared from all 4-differential metrics. We have seen that the prevalence of TA is at 20.3% in our study sample, and it is more likely that students in their 1st year of medical education are more likely to feel TA. Then this becomes less likely to appear in 2nd and 3rd years till they reach their 4th year where the chance of TA becomes more likely, and this likelihood should progress till the 6th year. Age shows another significance as the peak of having a TA is at 22 years where most participants are either in their 4th or 5th year of studying at the university. Being female also makes it more likely that an individual may experience TA and being a foreign national from Nigeria or India makes it even more likely although further evidence and research will be needed to corroborate these findings.

A lot of other factors besides the ones included (age, gender, year of study, and nationality) also need to be considered as they also contribute to feeling anxious just before and during an exam, some of which include social, financial, and personal variables [12]. We would also like to take this survey further to see if the increase in participants will change the findings that we have obtained as we have noticed that some differential metrics had fewer results to work with (e.g., number of participants from each year or nationality).

Acknowledgment

We would like to thank all the participants from YHU who took the time to participate in the survey and for contributing their information to help tackle the issue of TA in medical students of Armenia.

Abbreviations

TA – Test Anxiety
STABS- Suinn Test Anxiety Behaviour Scale
YHU- Yerevan Haybusak University
e.g. – exempli gratia/for example

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Ջեֆրին Ջոնի, Տիգրան Պետրոսյան. ՈՒՍԱՆՈՂՆԵՐԻ ՍԹՐԵՍԻ և ՏԱԳՆԱՊԻ ԳՆԱՀԱՏՈՒՄԸ. Հետազոտություն Երևանի «Հայբուսակ» համալսարանում: Հետազոտությունը նպատակ ունի բացահայտելու ուսանողների շրջանում սթրեսի և անհանգստության տարածվածությունը և պարզելու հավանական գործոնները, որոնք նպաստում են քննական տագնապին: Հարցմանը մասնակիցնել են Երևանի Հայբուսակ համալսարանի բժշկական ինստիտուտի ուսանողները: Հետազոտությունը իրականացվել է STABS հարցաշարով՝ հաշվի առնելով տարիքը, սեռը, կրթության տարին և ազգությունը: Ըստ STABS չափանիշների, ուսանողները, ովքեր հավաքել են 160 և ավելի միավոր, ունեն տագնապ, որն ազդում է նրանց ակադեմիական կատարողականի և հուզական վիճակի վրա: Հարցման արդյունքները ցույց են տվել, որ 103 մասնակիցներից 21-ը (20.3%) համապատասխանում են այս չափանիշին:

Հիմնաբառեր՝ թեստ, սթրես, բժշկական, ուսանող, հարցում,

Джефрин Джони, Тигран Петросян. СТРЕСС И ТРЕВОГА У СТУДЕНТОВ-МЕДИКОВ: Исследование в Ереванском университете Айбусак. Целью исследования является выявление распространенности стресса и тревоги среди студентов-медиков, определение способствующих факторов. Были опрошены студенты института медицины ЕУА с использованием STABS с учетом возраста, пола, года обучения и национальность. По критериям STABS, учащиеся, набравшие 160 баллов и выше, испытывают тревогу перед экзаменами, которая влияет на их успеваемость и эмоциональное благополучие. Оказалось, что из 103 участников участник опроса 21 (20,3%) соответствует этому критерию.

Ключевые слова*:* тестовая тревожность, стресс, студенты-медики, опрос.