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# Level of happiness among medical students in Bihar-An online survey

Rajath Rao, Bijaya Nanda Naik, Saket Shekhar<sup>1</sup>, Santosh Kumar Nirala, C. M. Singh, Manisha Verma, Anuvrshini Ramalingam

## Abstract:

**BACKGROUND:** Happiness is a state of mental well-being and influences the learning and performance of an individual. Medical education due to its academic culture and longer course duration affects the performance and happiness of the students. So, this study was done to assess the level of happiness and the factors associated with it among medical students in Bihar.

**MATERIALS AND METHODS:** A cross-sectional online survey was conducted among 321 medical students of all academic years from various medical colleges in Bihar. This study used a self-administered study tool using the online Google Form platform for data collection and assessed the level of happiness using Oxford Happiness Questionnaire. A multivariable binary logistic regression analysis was done to find out the predictors of happiness.

**RESULTS:** A total of 34.6% (95% CI: 29.5–39.9%) medical students were happy. Male (38.2%) students were found to be happier than female (29.2%) students. Age, place of stay, physical activity, meditation and yoga, frequent socialization, absence of psychiatric illness, and stressful situation in the family were the independent predictors of happiness. Around 42.4% of students had another career option, and 32.1% had a second thought about a career due to the COVID-19 pandemic. The presence of any psychiatric illness had a significant effect on the happiness level of the students.

**CONCLUSION:** Only one in three medical students is happy. Promotion of physical activity, meditation and yoga, and socialization will improve the happiness and thereby learning among medical students.

## Keywords:

Happiness, medical education, medical students, pandemic, physical activity, socialization, yoga and meditation

## Introduction

For ages, happiness has been considered an essential component of human life.<sup>[1]</sup> Additionally, the United Nations (UN) has recognized the pursuit of happiness as an important human goal.<sup>[2]</sup> Happiness or subjective well-being, according to literature reviews and meta-analyses on happiness and health, can be advantageous to health and longevity.<sup>[3]</sup> When compared to people with a positive emotional style, those with a negative emotional style have a weaker immune system and a higher risk of illness.<sup>[4]</sup> In comparison to life expectancy linked with low levels of subjective well-being or

happiness, high levels of subjective well-being or happiness can extend life by four to ten years.<sup>[3]</sup> A happy individual has positive sentiments about himself and others all of the time. Because of this internal contentment, one rejects despondency, accepts shortcomings, never forgets to learn, is always honest with oneself and others' lives in the present, and is unflappable in the face of adversity.<sup>[5]</sup> Happiness, according to psychologists, includes three key components, i.e., the presence of happy emotions, the absence of negative emotions, and life satisfaction.<sup>[6]</sup>

The medical sector is always demanding, and it necessitates a level of dedication that goes beyond commitment to provide the

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Department of Community and Family Medicine, All India Institute of Medical Sciences, Patna, Bihar, India, <sup>1</sup>Department of Community Medicine, Rama Medical College Hospital and Research Centre, Kanpur, Uttar Pradesh, India

## Address for correspondence:

Dr. Bijaya Nanda Naik, Department of Community and Family Medicine, Academic Block, AIIMS Patna, Bihar, India. E-mail: dr.bijaya02@gmail.com

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best possible treatment for people and the community. The medical field is one of the fields where the clinical period, hospital work pressure, and stressful environment have a significant impact on happiness and job performance. Age, gender, education, money, marital status, and relationship with others have all been demonstrated to have an impact on positive emotions and happiness levels in various researches.<sup>[7]</sup> Doctors and nurses experience high levels of occupational stress as a result of their daily exposure to patients' pain and suffering, severe workloads, and bad working conditions.<sup>[8]</sup> Occupational stress, in turn, impairs self-confidence and attention, increases irritability, causes sleep disorders and job burnout, and hence has a detrimental impact on employee satisfaction and population care quality.<sup>[9]</sup> Reduced satisfaction and happiness continue to pervade the professional healthcare context, necessitating the search for new approaches to meet these demands to ensure employee happiness and the best possible patient care. Happiness levels show a negative association with health system inefficiency, implying that happy societies have better health system performance. As a result, increasing and maintaining people's happiness is a viable alternative to cutting healthcare costs and boosting health system performance in a country.<sup>[10]</sup> Understanding and promoting pleasure among healthcare professionals remains a critical yet understudied field of study.

At present, there is a dearth of literature addressing the happiness levels of medical students who are future doctors studying in tertiary care institutes. As a result, this study may serve as a foundation for future research to further investigate and contribute to the body of knowledge regarding happiness in the health sector, as well as empower healthcare facility owners to increase their employees' happiness levels, thereby reaping the proven benefits of increased employee happiness. So, this study was designed to assess the level of happiness and to find out the factors associated with happiness among medical students of tertiary care institutions across Bihar.

## Materials and Methods

### Study design and setting

This was a cross-sectional study carried out on an online mode for a duration of 3 months (July–September 2021)

The study was conducted across tertiary care medical institutions in Bihar, India. Bihar has 14 medical colleges which included nine state government colleges, three private institutions, and two autonomous bodies with an intake of around 100–150 MBBS students per year. The participants were majorly from five medical colleges across Bihar.

### Study population and sampling

The study population included all the MBBS undergraduates who gave consent to participate in the study. None were excluded from the study.

Considering the prevalence of happiness among medical professionals to be 60.8%,<sup>[11]</sup> the minimum sample size was calculated to be 257 at 6% absolute precision and 95% confidence intervals (CI). The final sample size was calculated to be 283 after considering a 10% non-response rate using statulator.<sup>[12]</sup> But we included everybody who consent to participate in the study.

The study tool was shared among the MBBS students of the main institution where study was conducted and was asked to share the same among their friends, peers across various medical colleges in Bihar. The study tool in the form of "Google Forms" was sent to all students via WhatsApp and email. To make sure that only students filled the questionnaire, the Google Form was encrypted with a question in the beginning asking whether the participant is currently a medical student or not. If no, the form would end submission.

Though we intended to include all students, 321 students participated.

### Data collection tools and technique

The information was collected using a pre-designed semi-structured standard questionnaire in the form of "Google Forms" and was sent to eligible students via WhatsApp and emails to fill. Digital consent was encrypted in the Google Form link in the very beginning. The participant can only proceed further after giving consent.

The questionnaire consisted of three sections. All the items were in the English language. Section A included sociodemographic details about students like age, gender, place of stay, batch, permanent residence, and medium of passing class 12.

Section B included questions about factors and correlates of happiness among students which included frequency and duration of physical activity, sleep duration, socialization, screen time, addictive habits, the practice of yoga and meditation, aggregate score in their previous academic year, presence of doctors in the family, monthly family income, feeling apprehensive about current COVID-19 pandemic, current medical and psychiatric morbidities, second thought about career due to the pandemic situation, feeling to have another career option and not medicine, and self-reported height and weight.

Section C included questions about happiness using the Oxford Happiness Questionnaire (OHQ)<sup>[13]</sup> OHQ

consists of 29 items about happiness and job satisfaction with ratings on a 6-point Likert scale ranging from 1 for “strongly disagree” to 6 for “strongly agree.” Scores are given accordingly to each question. A total of 12 questions out of 29 were scored reversely. The total sum of scores ranges from 6 to 174. The total score then obtained was divided by 29 to arrive at the final score/global happiness score which ranged from 1 to 6. The final score was categorized as: 1-2: “Not happy,” 2-3: “Somewhat unhappy,” 3-4: “not probably happy or unhappy,” 4: “somewhat happy,” 4-5: “rather happy/pretty happy,” 5-6: “very happy,” and 6: “too happy.” Higher the scores, higher is the level of happiness. Further for the ease of analysis, the score <4 was taken as the unhappy category and ≥4 as the happy category for bivariate analysis. The reliability of OHQ was found to be 0.90.<sup>[13]</sup> The Cronbach’s alpha in Indian setting was found to be 0.82 (internal reliability of the tool is acceptable) with the principal component analysis showing 63.7% of variance explained by the six factors of the tool. Also, the Tucker–Lewis index of 0.91, comparative fit index of 0.92, and root mean square error of approximation value of 0.05.<sup>[14]</sup>

**Data analysis**

The obtained data were entered in MS Excel, and statistical analysis was done using IBM SPSS V.22 (SPSS inc., Chicago, IL, USA). Descriptive analyses were conducted to describe the sociodemographic characteristics and factors affecting the happiness among students. The results were either tabulated or shown as figures if necessary. Continuous variables like age, duration of sleep, screen time, and happiness score were expressed as mean (SD). The categorical variables like gender, the proportion of physical activity, addictive habits,

recent exam scores, and proportion of happiness were expressed as proportions. The mean difference between happiness scores across various variables of interest was expressed using an independent *t*-test or/and ANOVA wherever necessary. A multivariable binary logistic regression analysis was done to find out the independent factors contributing to happiness among medical students. Overall statistical significance was attributed to a *P* value <0.05 at 95% confidence intervals.

**Ethical consideration:** This study has been approved by Institute Ethics Committee, (AIIMS/Pat/IEC/2020/738). We adhered to the principles of ethics throughout the study and thereafter.

**Results**

**Demographic details of students**

In our study, out of 321 students, around 209 (65.1%) were aged ≥20 years, nearly more than half (59.5%) were males, around one-fourth (75,23.4%) belonged to rural areas, 281 (87.5%) were hostel dwellers, and 149 (46.4%) were in first professional MBBS. Almost three-fourths (229, 71.3%) did their higher schooling from the Central Board of Secondary Education (CBSE) curriculum. Only 67 (20.9%) students reported that their parents are doctors [Table 1].

**Lifestyle and attributes of happiness among medical students**

Only 138 (43%) students reported being physically active and among them, almost 118 (80.8%) practiced the same for ≥30 minutes per day. Nearly 211 (65.7%) students used to sleep for more than 7 hours at the night. Around, 14 (4.4%) used tobacco products, and 9 (2.8%) used

**Table 1: Sociodemographic characteristics and happiness score among medical students (n=321)**

Variable	Category	n (%)	Happiness score Mean (SD)	P-value (by independent t-test)
Age	<20	112 (34.9)	1.8 (0.98)	0.082
	≥20	209 (65.1)	1.6 (0.91)	
Gender	Female	130 (40.5)	3.6 (0.8)	0.001*
	Male	191 (59.5)	3.8 (0.7)	
Permanent Residence	Urban	246 (76.6)	3.7 (0.8)	0.976
	Rural	75 (23.4)	3.7 (0.6)	
Current place of stay	Hostel	281 (87.5)	3.8 (0.8)	0.042*
	Day Scholar	40 (12.5)	3.5 (0.7)	
Education board in class 12	CBSE	229 (71.3)	3.8 (0.7)	0.720#
	ICSE	21 (6.5)	3.7 (0.8)	
	State board	67 (20.9)	3.7 (0.7)	
	Others	4 (1.2)	3.4 (0.5)	
Current professional year in MBBS	First Professional	149 (46.4)	1.7 (0.96)	0.797#
	Second Professional	95 (29.6)	1.7 (0.93)	
	Third Professional	76 (23.7)	1.6 (0.91)	
Presence of doctors in the family	Yes	67 (20.9)	3.8 (0.8)	0.6
	No	254 (79.1)	3.7 (0.6)	

\*P<0.05 is significant #P-value by ANOVA

alcohol. Nearly 134 (41.7%) had scored around 51–64% aggregate in the previous professional exam. Only 14 (4.4%) out of 321 students regularly practiced yoga and meditation. Nearly three-fourths of students were dealing with stressful situations in their life (236,73.5%) and were apprehensive about the ongoing COVID-19 pandemic (245,76.3%). Around one-third (32.1%) of students had a second thought about their career due to the ongoing pandemic and 133 (41.4%) students sought another career option. Almost 55 (17.1%) and 31 (9.7%) students reported having a history of medical and psychiatric illness, respectively [Table 2].

### Happiness among medical students (OHQ)

The mean (SD) scores of students are provided in Tables 1 and 2. The mean (SD) global happiness score was

3.8 (0.7). There was a significant difference in mean (SD) scores across gender [Males scored higher compared to females, 3.8 (0.7) vs 3.6 (0.8)], current place of the stay [hostel dwellers scored more than day scholars, 3.8 (0.8) vs 3.5 (0.7)] [Table 1].

The overall mean (SD) happiness score before the division was 109.5 (22.8) out of a total possible score of 174 with a minimum score being 38 and a maximum score being 161.

Also, a significant difference in happiness scores was seen among students who were physically active compared to those who were not [4 (0.7) vs. 3.5 (0.8)], practiced yoga and meditation regularly compared to the one who did not [4.3 (0.7) vs. 3.5 (0.8)], facing stress

**Table 2: Lifestyle attributes and happiness score among medical students (n=321)**

Variable	Category	n (%)	Mean (SD) happiness score	P-value (by independent t-test)
Physical activity	Yes	138 (43)	4.0 (0.7)	<0.001*
	No	183 (57)	3.5 (0.8)	
Duration of physical activity (n=146)	<30 minutes	28 (19.2)	4.1 (0.6)	0.64
	≥30 minutes	118 (80.8)	3.9 (0.8)	
Sleep (in hours)	<7 hours	110 (34.3)	1.7 (0.9)	0.956
	≥7 hours	211 (65.7)	1.7 (0.9)	
Smoking	Yes	14 (4.4)	3.7 (0.7)	0.87
	No	307 (95.6)	3.7 (1.0)	
Alcohol	Yes	9 (2.8)	3.6 (0.8)	0.671
	No	312 (97.2)	3.7 (0.7)	
Other substance users	Yes	2 (0.6)	3.7 (0.8)	0.191
	No	319 (99.4)	4.5 (0.3)	
Recent professional exam score	<50	33 (10.3)	3.6 (0.7)	0.818#
	51 to 64	124 (38.6)	3.8 (0.8)	
	65 to 74	134 (41.7)	3.7 (0.8)	
	>75	29 (9)	3.7 (0.7)	
Meditation/Yoga	Never	161 (50.2)	3.5 (0.8)	<0.001**
	Somewhat	146 (45.5)	3.9 (0.7)	
	Regular	14 (4.4)	4.3 (0.7)	
Stressful situation	Yes	236 (73.5)	3.6 (0.8)	<0.001**
	Do not know	19 (5.9)	3.9 (0.7)	
	No	66 (20.6)	4.2 (0.6)	
Apprehension about pandemic	Yes	245 (76.3)	3.7 (0.7)	0.442
	No	76 (23.7)	3.8 (0.8)	
The second thought about career due to pandemic	Yes	103 (32.1)	3.6 (0.7)	0.023**
	No	176 (54.8)	3.8 (0.7)	
	Not sure	42 (13.1)	3.6 (0.7)	
Another career option	Yes	133 (41.4)	3.5 (0.8)	<0.001#
	Not sure	43 (13.4)	3.8 (0.7)	
	No	145 (45.2)	3.9 (0.7)	
Any medical illness	Yes	55 (17.1)	3.6 (0.8)	0.082
	No	266 (82.9)	3.8 (0.7)	
Any psychiatric illness	Yes	31 (9.7)	3.0 (0.9)	<0.001#
	No	237 (73.8)	3.9 (0.7)	
	Do not know	53 (16.5)	3.3 (0.7)	
BMI	Underweight	34 (10.6)	1.6 (0.94)	0.907#
	Normal	139 (43.3)	1.7 (0.95)	
	Overweight	139 (43.3)	1.7 (0.92)	

\*P-value by ANOVA \*P<0.05 is significant



situation in life compared to those did not [3.6 (0.8) vs. 4.2 (0.6)], having second thought about career due to the ongoing COVID-19 pandemic compared to those who did not have any second thoughts [3.6 (0.7) vs. 3.8 (0.7)], having thought of another career option compared to those students who did not [3.5 (0.8) vs. 3.9 (0.7)], and having a history of any psychiatric illness compared to those who did not have any[3 (0.9) vs. 3.9 (0.7)] [Table 2].

Among 321 students, none were too happy, only 18 (5.6%) were very happy, 93 (29%) were rather happy, and 16 (5%) were somewhat happy [Figure 1].

Overall, out of a total of 321 students, only 111 (34.6%) (95% CI: 29.5–39.9%) were happy.

Some specific items of OHQ are shown in Figure 2. Nearly one-fourth (80. 24.9%) of students slightly agreed that they felt their life is very rewarding. About 21.5% (69) students strongly disagreed with the fact that they are not particularly optimistic about their future while more than half (55.2%, 117) students had a mixed opinion when asked about their looks. Only about one-fourth (81, 25.2%) slightly agreed with the statement that they are very happy. Nearly 40 (12.5%) and 25 (7.8%) students strongly agreed that they are not especially in control of their lives, and they don't have particularly happy memories of their past [Figure 2].

### Predictors of happiness among the medical students

On univariate analysis, the current stay of the students, practicing regular physical activity, doing regular yoga and meditation, those who socialized, those who had didn't think of another career option, absence of any

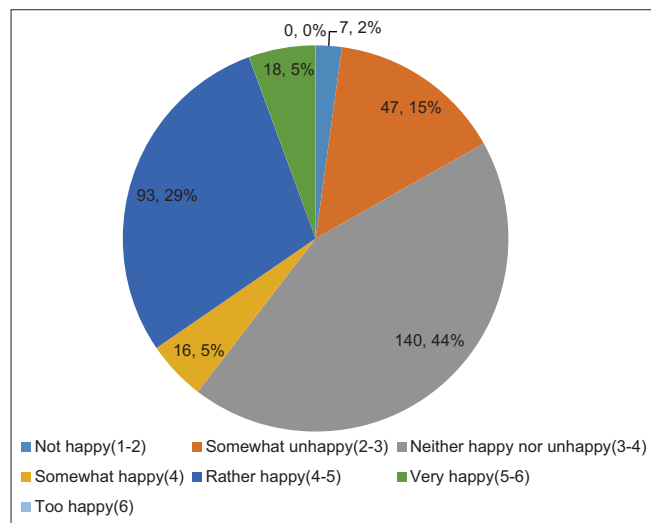


Figure 1: Distribution of students according to various categories of happiness (N = 321)

psychiatric illness, and stressful situations in their life were significant predictors of happiness among medical students.

However, on multivariable analysis, staying in hostel [adjusted odds: 2.7, 95% CI: 1.035–7.04], staying physically active [adjusted odds: 1.72, 95% CI: 1.009–2.93], regular practicing of yoga and meditation [adjusted odds: 3.28, 95% CI: 1.2–11.78], socialization [adjusted odds: 3.026, 95% CI: 1.55–5.9], absence of any psychiatric conditions [adjusted odds: 4.93, 95% CI: 1.34–18.2], and absence of stressful situation in life [adjusted odds: 2.874, 95% CI: 1.6–5.134] were independent predictors of happiness among medical students [Table 3].

### Another career option

Almost 133 (41.4%) students gave a thought about another career option, and when asked for the reasons, 31 (23.3%) mentioned the difficult medical curriculum, 30 (22.5%) quoted stressful lifestyle and underpaid jobs, and 29 (21.8%) stated that violence against the doctors as a reason.

### Discussion

The level of happiness reflects the medical students learning capabilities and emotional well-being. Several

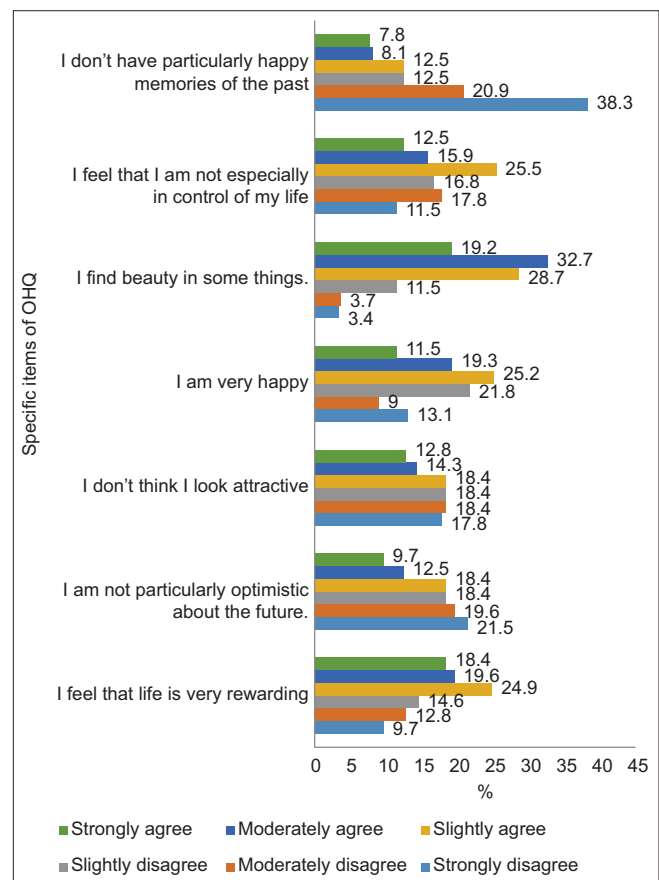


Figure 2: Specific items of the Oxford Happiness Questionnaire (OHQ) (N = 321)

**Table 3: Predictors of happiness among medical students (n=321)**

Variables	Cat	Unhappy (%)	Happy (%)	COR (95% CI)	AOR (95%CI)
Age	≤20	128 (65.6)	67 (34.4)	1	
	>20	82 (65.1)	44 (34.9)	1.025 (0.6-1.6)	
Gender	Male	118 (61.8)	73 (38.2)	1.498 (0.9-2.4)	
	Female	92 (70.8)	38 (29.2)	1	
Stay*	Hostel	177 (63)	104 (37)	2.770 (1.183-6.4)**	2.7 (1.035-7.04)**
	Day scholar	33 (82.5)	7 (17.5)	1	1
Permanent Residence	Rural	54 (72)	21 (28)	1	
	Urban	156 (63.4)	90 (36.6)	1.484 (0.8-2.615)	
Physical activity*	No	134 (73.2)	49 (26.8)	1	1
	Yes	76 (55.1)	62 (44.9)	2.231 (1.396-3.564)**	1.721 (1.009-2.93)**
Meditation & yoga*	Never	20 (74.5)	41 (25.5)	1	1
	Somewhat	84 (57.5)	62 (42.5)	2.16 (1.33-3.5)**	2.251 (1.3-3.89)**
	Regular	6 (42.9)	8 (57.1)	3.902 (1.2-11.9)**	3.284 (1.2-11.781)**
Sleep	≤7 hours	129 (62)	79 (38)	1.55 (0.944-2.545)	
	>7 hours	81 (71.7)	32 (28.3)	1	
Socialization*	No	82 (84.5)	15 (15.5)	1	1
	Yes	128 (57.1)	96 (42.9)	4.1 (2.226-7.5)**	3.026 (1.546-5.9)**
Education board of class 12	State board	47 (70.1)	20 (29.9)	1	
	Other than state board	163 (64.2)	91 (35.8)	1.312 (0.7-2.3)	
Presence of doctors in the family	Yes	43 (64.2)	24 (35.8)	1.07 (0.610-1.881)	
	No	167 (65.7)	87 (34.3)	1	
Current professional year in MBBS	First Professional	93 (62.4)	56 (37.6)	1	
	Second Professional	64 (67.4)	31 (32.6)	0.804 (0.4-1.3)	
	Third Professional-1	22 (68.8)	10 (31.2)	0.755 (0.33-1.7)	
	Third Professional-2	31 (70.5)	13 (29.)	0.696 (0.336-1.442)	
Type of medical college	Govt	180 (64.7)	98 (35.3)	1.131 (0.56-2.29)	
	Private	27 (67.5)	13 (32.5)	1	
The second thought about career due to pandemic	Yes	72 (69.9)	31 (30.1)	1	
	No	138 (63.3)	80 (36.7)	1.34 (0.81-2.2)	
Another career option*	Yes	98 (73.7)	35 (26.3)	1	
	No	112 (59.6)	76 (40.4)	1.9 (1.172-3.081)**	
Apprehension about pandemic	Yes	162 (66.1)	83 (33.9)	1	
	No	48 (63.2)	28 (36.8)	1.139 (0.6-1.9)	
Any medical illness	Yes	42 (76.4)	13 (23.6)	1	
	No	168 (63.2)	98 (36.8)	1.883 (0.96-3.69)	
Any psychiatric illness*	No	137 (57.8)	100 (42.2)	6.813 (2.015-23.035)**	4.93 (1.3-18.2)**
	Don't Know	45 (84.9)	8 (15.1)	1.659 (0.4-6.785)	1.543 (0.3-6.8)
	Yes	28 (90.3)	3 (9.7)	1	1
Stressful situation*	Yes	173 (73.3)	63 (26.7)	1	1
	No	37 (43.5)	48 (56.5)	3.562 (2.125-5.973)**	2.874 (1.6-5.134)**

\*Parameters are taken for multivariable binomial logistic regression. \*\*P<0.05 is significant, Nagelkerke R<sup>2</sup> 0.299. COR-Crude odds ratio, AOR-Adjusted odds ratio, CI-Confidence intervals

factors contribute to students’ happiness throughout their time in medical school, and our study has tried to highlight certain predictors of happiness among medical students.

Our study highlighted that only one-third of the medical students were happy which is in line with a study from Iran which reported that 35% of medical students were moderately happy.<sup>[8]</sup> On a contrary, studies from different parts of India showed that almost 61–70% of medical students were happy which is almost double compared our study.<sup>[11,15]</sup> This may be because we have included all the semesters of medical students in the

study, and this study was done during the COVID-19 pandemic where most of the situation around was tense and stressful. Happiness and stressful life events are negatively correlated.<sup>[16,17]</sup>

In our study, males were happier than females (mean difference of OHQ scores: 0.2). A similar finding of male dominance was seen in studies Rehman *et al.* and Kamthan *et al.*,<sup>[11,18]</sup> while Kulkarni and Sanjeev in their study showed the other way round.<sup>[15]</sup> On a contrary, Surman *et al.* showed that there is a very slight difference in happiness across gender.<sup>[19]</sup> This may be because male students are more involved in many activities including

recreational and physical activities compared to females, and that might have added to the overall happiness.

Physical activity and happiness have been shown to have significant effects on human health.<sup>[20]</sup> We found out that students who practiced physical activity routinely scored better happiness scores than those who do not. Fisher *et al.* in their cross-sectional study showed a positive correlation between happiness and physical activity among female medical students in Cyprus.<sup>[21]</sup> Kamthan *et al.* showed that a maximum of happy people were involved in various physical activities.<sup>[11]</sup> But Benzo *et al.* showed only a modest association between exercise and happiness.<sup>[22]</sup> Further adding to this, students who practiced yoga and meditation regularly were happier compared to those who never practiced. Prasad *et al.* also showed that yoga and meditation had a significant improvement in happiness, positivity, personal satisfaction, and self-confidence among medical students.<sup>[23]</sup> Also, students with no stressful situations scored better happiness scores compared to those who had stressful events. This is in accordance with a study by Kumar which showed that happiness had a significant negative relationship with stressful life events.<sup>[16]</sup>

Our study reported that there was no difference in the happiness level among smokers and nonsmokers, alcoholics and non-alcoholics. Other substance users were less happy compared to non-users. However, this difference was statistically insignificant. Higher happiness levels were linked to lower levels of habitual cigarette smoking.<sup>[24]</sup> Substance use will affect the mental health by directly hampering the mood and happiness.

Students who thought about another career option other than MBBS after joining the course were less happy compared to those who did not have any such second thoughts. Pollock *et al.* in their research paper found that orientation to happiness partially mediated the relationship between extraversion and positive affect.<sup>[1]</sup> Rahimi Khalifeh Kandi *et al.* in showed that happiness among medical students can be improved by planning correctly in the field of education and ensuring the future of jobs among students.<sup>[25]</sup> Students who gave a second thought to their careers due to the ongoing pandemic were less happy than those who did not care about the same. A study by Isaradisaiikul *et al.* also showed the effect of the pandemic on the subjective happiness of the students which is in accordance with our findings.<sup>[17]</sup> This is also explained by the fact that majority of our students were apprehensive about the current COVID-19 pandemic.

In our study, current stay of students (hostel dwellers), those who were physically active, practiced regular yoga

and meditation, frequently socialized, those without any psychiatric conditions, and those without any stressful events in their life predicted the happiness. A systematic review showed age, gender, positive attitude, altruism (expression of generosity), career success, organizational dynamics, and work-life balance determined the happiness among healthcare professionals.<sup>[26]</sup> Walsh *et al.* showed career success predicted happiness.<sup>[27]</sup> Kamthan *et al.* emphasized the role of physical activity, staying clean from tobacco and drugs, and believing in faith and higher consciousness as predictors of happiness among medical students.<sup>[11]</sup> A study among physiotherapy students reports that socialization, life balance, and optimism predicted happiness.<sup>[28]</sup> A study in Iran reported that significant predictors of happiness were satisfaction with mental health, monthly salary, satisfaction with salary, quality of life, age, and job satisfaction among healthcare workers.<sup>[29]</sup> Moghadam *et al.* reported secure attachment style, male gender, and scholarly achievement as predictors of happiness.<sup>[30]</sup> Van Dongen and Van der Graaf showed that love and relationships and family contribute the most to a happy doctor.<sup>[31]</sup> Ghahramani *et al.* quoted the emotional intelligence of medical students as the strongest determinant of happiness.<sup>[32]</sup> Medical schools should recognize that they are influencing not just students' professional development but also their personal growth, both of which are required to establish the foundations of a happy doctor.<sup>[33]</sup>

### Limitations and recommendation

This study is not without limitations. Firstly, this is a majorly a single-center study and from one state with few colleges participating. So, results cannot be generalized. More such studies involving many medical colleges from parts of the country should be planned. Secondly, this study was conducted in an online mode via self-administered Google Forms. This study could have been done via face-to-face interview, but due to the concerns of the ongoing COVID-19 pandemic, it was conducted in online mode.

MBBS is a long-duration course and so happiness is important in skill development and knowledge acquisition during this long period of training. Amidst vigorous training during the MBBS course, physical activity, meditation, yoga, and socialization can be incorporated to improve the happiness and well-being of the students and thereby improvement in their learning capabilities. Considering the future of these students and how sensitive this issue can be for their work performance, medical colleges should seriously consider these factors and encourage students to promote a happy environment.

## Conclusion

Only one in three medical students is happy. Staying in a hostel, staying physically active, practicing yoga and meditation regularly, socialization, absence of any psychiatric conditions, and stressful situations in life were independent predictors of happiness among medical students.

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## Conflicts of interest

There are no conflicts of interest.

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