



## A cross-sectional study to assess happiness and its correlates among medical undergraduates and interns of Bangalore Medical College and Research Institute, Bengaluru, India

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### ABSTRACT

Happiness is the fundamental goal of a human being. Medical students and Interns are less happy when compared to others, this may be due to their hectic academic schedule and unpredictable long hours of work.

### Objectives:

To assess happiness and its correlates among medical undergraduates and interns in Bangalore Medical College & Research Institute, Bengaluru.

### Materials/Methods:

A cross-sectional study was conducted among medical undergraduates and interns during the period of 2023. 410 participants are selected by Stratified Random Sampling. Happiness was assessed by the Oxford Happiness Questionnaire. The data collected was entered in MS Excel and analysed using SPSS 26.0.

### Results:

Mean Happiness score is found to be  $3.6 \pm 0.545$ . Out of 410 participants, 274(67%) participants are in the happy group and 136(33%) of the participants are in the unhappy group. Factors such as Gender, Year of study, Socio Economic Status and Type of stay found to have statistically significant association with happiness.

### Conclusion:

One in 3 medical students were found to be unhappy. The study revealed that differences in happiness can be based on Gender, Year of study, Socio Economic Status and Type of stay.

**Keywords:** Happiness, Medical students, Interns, Bengaluru

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## INTRODUCTION

Happiness is the fundamental goal of a human being.<sup>1</sup> It is a very broad concept consisting of joy, contentment, and other positive emotions. Psychologists believe that three main components of happiness are the relative existence of positive emotion, the lack of negative emotions and life satisfaction.<sup>2</sup> Happy people have a positive attitude and they are responsible and excellent citizens. Happiness is recognized as an emotion which has an important effect on the success of people. Inner happiness is necessary to be healthy, to mature in professional life which in turn increases Quality of Life and Life Expectancy of healthy people.<sup>3</sup> Medical students and Interns are less happy when compared to others, this may be due to their hectic academic schedule and unpredictable long hours of work. The most challenging part comes when students are exposed to the harsh and practical realities of the medical world. Interns also have many unhappy situations in their working conditions. The direct contact with patients, witnessing their emotional stress and breakdowns, seeing injuries and wounds, and operating on actual human bodies cause stress in medical students<sup>4</sup>. Fear of failure, vast amount of content that must be mastered, inability to cope with the high expectations of parents and peers are found to be the most observed sources of stress.<sup>5</sup> It has been observed that medical school environment in India is extremely stressful and has led to suicide and suicidal attempts by the students. Happiness will be affected by age, gender, family, social environment, income, education, job opportunities, personality characteristics, intelligence, values, beliefs, motivations, and knowledge and life skills<sup>6</sup> and also with career prospect<sup>7</sup>. Medical field is one of the fields that due to the clinical period and the pressures of hospitals and stressful environments have considerable effects on happiness and their job performance. As there were only minimal studies done regarding the happiness among medical students and interns, this study was undertaken to assess the happiness and its correlates of medical students to see how happy are the budding doctors in Bangalore Medical College and Research Institute, Bengaluru.

## Methodology

It is a cross-sectional study conducted in medical undergraduates and interns of Bangalore Medical College and Research Institute, Bengaluru during the period of May 2023 to July 2023. Medical undergraduates studying in all years and interns were included in the study. Students who are under any medications that have an effect on affect are excluded from the study. Based on a previous study conducted in 2018 by Kamthana S et al.<sup>8</sup>, the happiness distribution in regards to baseline characteristics revealed that 60.8% of the selected medical students were in the happy group. Considering this data in our study with a confidence interval of 95%, sample size was calculated to be 410. Stratified Random Sampling used to select samples to study. Each year of MBBS considered as strata and equal number of students were selected from each year that came to 82 students from each year.

## Method of Data collection

It is a cross-sectional study conducted in medical undergraduates and interns of Bangalore Medical College and Research Institute, Bengaluru during the period of May 2023 to July 2023. Based on a previous study conducted in 2018 by Kamthana S et al.<sup>8</sup>, the happiness distribution in regards to baseline characteristics revealed that 60.8% of the selected medical students were in the happy group. Considering this data in our study with a confidence interval of 95%, sample size was calculated to be 410. Stratified Random Sampling used to select samples to study. Each year of MBBS considered as strata and equal number of students were selected from each year that came to 82 students from each year. After obtaining approval and clearance from the institutional ethics committee, and permission from Director cum Dean of the medical college the subjects fulfilling the inclusion criteria enrolled for the study after obtaining informed consent. Participants who were absent on the day of study and the subjects who are under any medications that have effect on effect excluded from the study. Socio demographic and academic details were collected and oxford happiness Questionnaire used for assessing happiness.



**Assessment tool:**

Validated, semi structured questionnaire consisting of 2 parts, one part contains socio-personal characteristics and another one contains Oxford Happiness Questionnaire<sup>9</sup>. Modified Kuppuswamy scale 2022<sup>10</sup> was used for determining the Socio-Economic Status of the participants. Oxford Happiness Questionnaire<sup>9</sup> which contains 29 questions to measure happiness that uses a six-point rating scale of agreement ranging from 1 (strongly agree) to 6 (strongly disagree). Reliability for this scale was found to be 0.91. The data collected and entered in Microsoft Excel and analyzed using SPSS version 26.0. Sociodemographic data presented using descriptive statistics namely mean, median, standard deviation, interquartile range, percentage wherever applicable. Independent t test/ Mann Whitney U test used to determine significant difference between two groups. Chi Square test used to determine the association between the qualitative variables, p<0.05 considered statistically significant. Data presented in the form of tables, figures, and

graphs wherever necessary. Approval and clearance were obtained from the Institutional Ethics Committee [BMCRI/PS/255/22-23]. The study participants fulfilling the eligibility criteria were enrolled for the study after obtaining the written informed consent.

**Results**

A total of 410 students were enrolled in the study aged between 18-24 years with mean age of 21.13±1.445 years. This group comprised 282 (68.80%) males and 128(31.2%) females. Out of the participants 103 (25.12%) reside at home, 285 (69.51%) stay in a hostel, 19 (4.63%) live as paying guests and 3(0.74%) stay at a relative’s home. Most of the participants come from Nuclear Families accounting for 351 (85.6%), followed by Joint families with 34 (8.3%), and three generation families with 25 (6.1%). Categorization of Body mass index is done as prescribed by International Association for study of Obesity.<sup>11</sup> Detailed description of the Socio Demographic details are given in [Table 1]

**Table 1: Socio demographic details of the participants(N=410)**

Characteristics	N	%
<b>Sex</b>		
Male	282	68.8%
Female	128	31.2%
<b>Type of Local residence</b>		
Hostel	285	69.51%
Home	103	25.12%
Pg/Rented Home	19	4.63%
Relatives Home	3	0.74%
<b>Type of family</b>		
3 Generation	25	6.1%
Nuclear	351	85.7%
Joint	34	8.29%
<b>Birth Order</b>		
1	224	54.6%
2	145	35.4%
>2	41	10%



Socio-Economic Status*		
Upper	107	26.1%
Upper Middle	149	37.3%
Lower Middle	98	23.9%
Upper Lower	56	12.7%
Lower	0	0%
Body Mass Index**		
Underweight	46	11.2%
Normal	198	48.3%
Overweight	93	22.7%
Pre- obese	58	14.1%
Obese type 1	15	3.7%
Obese type 2	0	0%
Obese Type 3	0	0%
Locality of Home		
Urban	284	69.3%
Rural	126	30.7%
Substance abuse		
No Substance Use	383	93.14%
Alcohol	20	4.8%
Tobacco	9	2.2%
Others	2	0.4%

\*Socio Economic Status is calculated by Modified Kuppuswamy scale 2022<sup>10</sup>

\*\*Body Mass Index is categorised as prescribed by International Association for study of Obesity.<sup>11</sup>

**Happiness of Study Participants with the Oxford Happiness Questionnaire** the mean Happiness score is found to be  $3.6 \pm 0.545$ . by taking the numerical average of the scores 3.5 Participants are divided into Happy and

Unhappy Groups. The results of the study show 274(67%) participants are in the happy group and 136(33%) of the participants are in the unhappy group. The results are shown in [Figure 1].

Fig 1 : Distribution of Happiness among participants



Happy group comprises 209 (76.3%) were males and 65(23.7%) were females. Second year MBBS

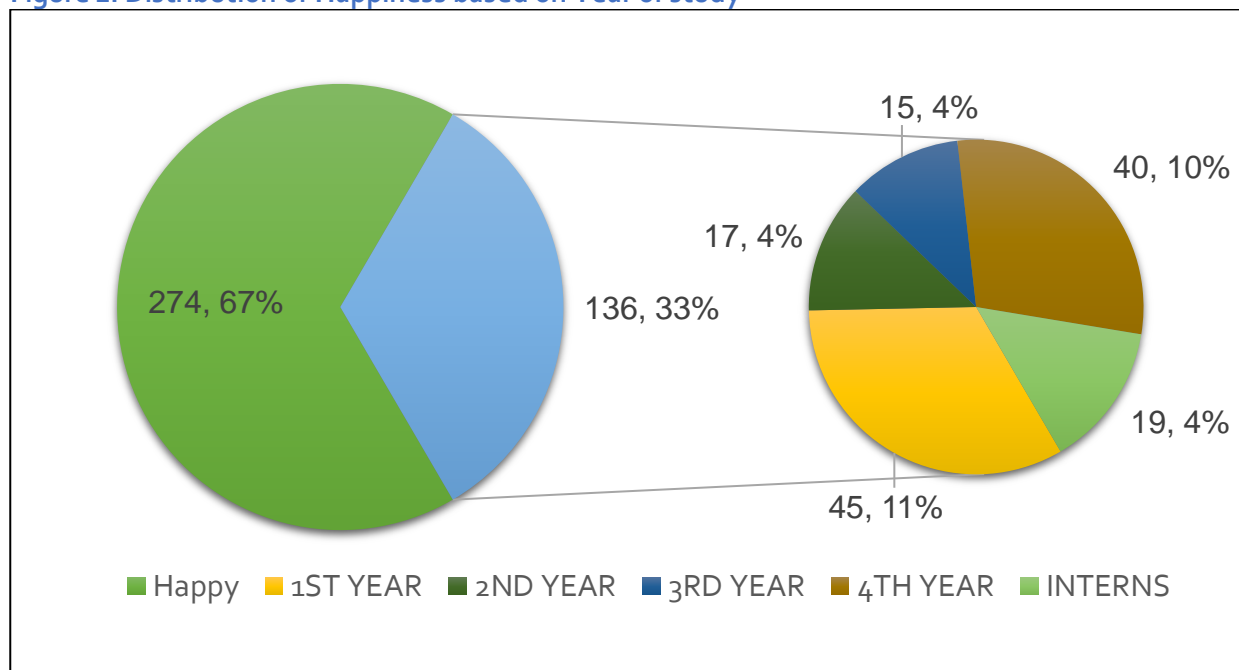
students 65(23.7%), found to be in majority, in Happy group followed by interns 63 (23%).



Unhappy group consists of the majority of first years 45(33.1%) followed by 4<sup>th</sup> year MBBS

40(29.4%). Portrayed the results in [Figure 2].

Figure 2: Distribution of Happiness based on Year of study



Participants are divided into various classes of Happiness based on individual Happiness Scores.

The division of study participants into various groups showed in [Table 2].

Table 2: Distribution of Happiness based on Happiness score among the participants (N=410)

Happiness Class	N	%
Not Happy	0	0%
Somewhat Unhappy	28	6.8%
Not Particularly Happy or Unhappy	117	28.5%
Somewhat happy or moderately happy.	6	1.5%
Rather Happy	42	10.2%
Too Happy	131	32%
Very Happy	86	21%

### Happiness and its Correlates

Various correlates like Age, Sex, Socio Economic status, Year of studying MBBS, and type of stay etc evaluated for any association with happiness of the study participants. Sex of the participants, Year of MBBS, Type of local residence and Socio-

Economic Status found to have statistically significant association with Happiness Score of the participants ( $p < 0.05$  with Happiness) [Table 3]. Other Socio-Demographic details like BMI, Locality of Home and Birth Order and substance abuse found to have no significance association.



**Table 3: Correlates of Happiness. (N=410)**

Characteristics	Happiness categories		Total (%) (N=410)	p-value
	Happy (n=274)	Unhappy (n=136)		
<b>Sex</b>				
Male	209	73	282 (68.8%)	<0.001*
Female	65	63	128 (31.2%)	
<b>Year of MBBS</b>				
1st year	37	45	82 (20%)	<0.001*
2nd year	65	17	82 (20%)	
3rd year	67	15	82 (20%)	
4th year	42	40	82 (20%)	
Interns	63	19	82 (20%)	
<b>Type of Local residence</b>				
Home	92	11	103 (25.12%)	<0.001*
Hostel	166	119	285 (69.51%)	
Pg/rented home	13	6	19 (4.63%)	
Relatives home	3	0	3 (0.74%)	
<b>Socio- Economic Status</b>				
Upper	72	35	107 (26.1%)	0.001*
Upper Middle	120	29	149 (36.34%)	
Lower Middle	45	53	98 (23.9%)	
Upper Lower	37	19	56 (13.66%)	
Lower	0	0	0 (0%)	
<b>BMI categories</b>				
Underweight	26	20	46 (11.2%)	.393
Normal	139	59	198 (48.3%)	
Overweight	62	31	93 (22.7%)	
Pre- obese	36	22	58 (14.1%)	
Obese type 1	11	4	15 (3.65%)	
Obese type 2	0	0	0 (0%)	
Obese type 3	0	0	0 (0%)	
<b>Birth Order</b>				
1	153	71	224	.779
2	94	51	145	
>2	27	14	41	
<b>Locality of home</b>				
Rural	90	37	127	.245
Urban	184	99	283	



## DISCUSSION

Happiness is recognized as an emotion which influences the success of people. It is very important for having a positive attitude in life, it is necessary for the challenges in life. Several factors contribute to medical student's happiness throughout their life. The present study conducted tried to find out correlates of happiness. The present study conducted showed happiness distribution in the study participants is 67%, which is higher when compared to a study conducted by Shivam Kamthan et al<sup>8</sup>. Which showed 60.8% of the medical students of Subharti Medical College, Meerut in a happy group. Which is also much higher compared to a study conducted by Rajath Rao et al.<sup>12</sup>, only 34.6% of the students found to be a happiness group in medical students of Bihar. Unlike these, a study conducted by Surendra Kulkarni and Chincholikar Sanjeev<sup>13</sup> in MIMER Medical College Talegaon Dabhade, Pune found out 70% of the medical students were in the Happy group. This difference can be because the data collection happened in between the semesters, not in an exam season and after the COVID-19 pandemic. From the results of the study conducted by Sayali C. Tiwari and Swati R. Deshpande<sup>14</sup> increase in the undesirable life events lead to more psychological distress and in turn can affect the happiness of students like the same Covid- 19<sup>15</sup>. Our study shows a significant association with happiness and gender. Majority of the Happy group consists of Males. Similar results were found with Rajath Rao et al.<sup>12</sup> and Shivam Kamthan et al<sup>8</sup> but it was not statistically significant. Contrary to this a study conducted by Ali Sahraian<sup>5</sup> and Deepak Kumar<sup>16</sup>, shows female predominance in the happiness group. Some of the studies like Kandi ZRK<sup>7</sup> et al and Isaradisaiikul SK<sup>15 do</sup> not show any statistically significant association with gender. When analysing the year of MBBS studying and Happiness, in our study Interns 62 (78.05%) found to be the majority in the happiness group followed by Students of second year MBBS 56(68.29%). Unhappy group consists of the majority of First year students 33(40.24%) followed by final year students 30(36.58%). In a study conducted by Kulkarni S<sup>13</sup> et al. it was found that when the

academic year progresses happiness decreases in students. But it was found to have no statistically significant association. There is a significant association found in our study about Socio-Economic Status and Happiness. Happiness is more with higher Socio- Economic Status, which is similar with a study conducted by Sun S<sup>17</sup> et al. and Alshehri AA<sup>18</sup> et al. Mean subjective wellbeing increased with higher educational levels and income groups. Various other factors like type of local stay, BMI, Birth order and substance abuse analysed but, in our study, found to have no significance. Study by Kamthan S<sup>8</sup> et al. also showed no correlation with Birth order and Happiness. Unlike our study, a study done by Ataeiasl M et al<sup>19</sup> shows a significant association with smoking and happiness.

## Conclusion

From the study conducted, one in 3 medical students were found to be unhappy. Sex of the participants, Type of stay, Socio Economic status, and year MBBS studying found to have a significant correlation with happiness of the participants. But birth order, body mass index, and substance abuse were found to have no significant correlation with happiness.

## Limitations

This study solely concentrates on a single institution, namely a Government Medical College, situated in an urban area. A more comprehensive approach involving both private and government colleges, including those located in rural areas, would have been advantageous. Moreover, as it employs a cross-sectional design, it fails to establish a causal relationship between factors and happiness. Integrating a qualitative component could have yielded more insightful results.

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