

# Happiness Index of Undergraduate Students of Air University, Islamabad; A Cross Section Study

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## Abstract

**Objectives:** To calculate the happiness score of Air University students using the Oxford Happiness Questionnaire, along with a structured questionnaire to associate the factors that affect it.

**Materials & Methods:** This was analytical cross sectional study conducted at Air University, after IRB approval. Students from age of 18 to 26 years were included after consent. Data was collected through simple random sampling. SPSS was used for data entry and analysis. Descriptive analysis was done by calculating percentages, frequencies, standard deviation and inferential analysis was done by doing cross tabulation and chi square testing.

**Results:** Happiness score was calculated using oxford happiness questionnaire, 185 respondents (52.9%) fell into the category of not particularly happy and 113 (32.3%) pretty happy. Significant associations were found between happiness level and frequency of sleep, social interaction, better grades of physically active students, eating healthy food, 3 meals a day, time spent in physical activities per week, quality of sleep, hours of socializing with friends per week, improvement in life by use of technology and academic score of students at p-values 0.000, 0.000, 0.003, 0.005, 0.000, 0.026, 0.000, 0.002, 0.001 and 0.025 respectively.

**Conclusions:** Study concluded that happiness level is strongly associated with important parameters of life like healthy food, social interaction, sleep, physical activities and academic score.

**Keywords:** Happiness, Sleep, Social Interaction and academic performance

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## Introduction

Health is a condition of absolute bodily, intellectual and community based welfare and not just the absence of sickness.<sup>1</sup> Happiness from inside is the most important requirement for good health, to pursue office work and to help mankind. Happiness is a mental state that can be explained by positive thoughts extending from pleasure to extreme delight, having both sentimental and perceptive components. Psychologists identify it as an emotion. The happiness index is a broad study tool that can be used to evaluate happiness, comfort and features of viability and flexibility.<sup>2</sup> Different studies have shown that demographics, education, physical activities, diet and others are related to positive feelings and level of happiness in students.<sup>3</sup> Students' eating habits could have an impact on their behavior and mood hence by having a look at their daily diet

be it snacking or normal meals could reflect their level of happiness. A study conducted in 2018 on students of Qazvin University of Medical Sciences highlighted that having fruits and vegetables in breakfast daily and frequent snacking significantly raised the student's happiness level then those students who were conscious about their diet.<sup>4</sup> Healthy eating could significantly raise the levels of happiness and should be encouraged among these students. Physical activity is positively associated and closely linked with happiness.<sup>5</sup> The results of the study on university students from 24 different countries showed that higher sedentary behavior was associated with lower happiness and poorer life satisfaction while moderate or high physical activity was linked with higher life satisfaction, greater happiness and better perceived health.<sup>6</sup> Exercise seems to contribute quite significantly to the happiness level of an undergraduate university student. A research done on Japanese

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adolescents in 2020 found that sleep also affects happiness.<sup>7</sup> A Chinese study shows that happiness is affected by duration and quality of sleep. Overall, the female gender was found prone to lower levels of happiness due to sleep.<sup>8</sup> Academic achievement also influences happiness levels in students.<sup>9</sup> Technological advancement has had revolutionary effects on our lives. The use of internet is particularly high among the college and university students showing positive effects on their lives.<sup>10</sup> The uninhibited use of internet has resulted in a decline in subjective happiness.<sup>11</sup> Social interaction plays a crucial role in the mental wellbeing and happiness of a person. It is imperative for personal growth, building interpersonal relationships and happiness of individuals.<sup>12</sup> A study conducted on Malaysian university students during COVID-19 pandemic indicates that the closure of educational institutions has resulted in an increase in stress and depression and decrease in happiness among students.<sup>13</sup> This study aimed to assess the level of happiness of students of Air University by determining the factors that affected the mental health of students particularly during the ongoing COVID-19 pandemic. It emphasized the extent to which social interactions, physical activity, eating habits, sleep and other relevant variables influence the level of happiness which can be used as a tool to improve a student's environment leading to a positive effect on their efficiency and making them a useful member of the society in the coming future.

Overall, such a study would help us improve certain variables of happiness helping us create more enthusiastic learners and positive goal setters playing an active role in the society. The aim of our study is to highlight the importance of happiness in students of Air University and its effect on quality of education among students.

## Materials and Methods

It was an analytical cross-sectional study conducted in a period of eight months from March till October 2021 on students of Air University, Islamabad having a sample size of 350 students. Confidence interval is 95% with 5% margin of error. The prevalence was taken as 50%. Simple random sampling by draw method was used. Data was collected using 2 questionnaires and entered in the SPSS software version 23 for analysis. One of them was Oxford Happiness Questionnaire which is derived from Oxford Happiness Inventory. This questionnaire assessed the happiness index score of student. The other questionnaire used was a structured questionnaire comprising of variables like eating habits, physical activities, social interaction, academic score and sleep pattern that related to happiness level in students.

Oxford Happiness questionnaire comprised of 29 questions and each of them were rated within a Likert Scale ranging from 1 to 6. Within this 1 stood for strongly disagree and 6 stood for strongly agree. Following range and categories were made:

- 1-2: Not happy.
- 2-3: Somewhat unhappy.
- 3-4: Not particularly happy
- 4-5: Pretty happy.
- 5-6: Very happy.

Descriptive analysis was done using mean, standard deviation, frequencies and percentages. Inferential analysis was done by doing cross tabulation and using chi squared test using p value as 0.05. Results were presented in the form of tables and graphs and were disseminated.

## Results

Happiness score was calculated using oxford happiness questionnaire, out of 350 respondents, 150 were males and within the male gender 58% were not happy and 42% were happy. Out of 200 females' respondents 67% were not happy while 32.5% were happy.

58.7% of 109 who fell in the category of 18-20 years, were not particularly happy. 51.2% of 215 who fell in the category of 21-23 years were not happy, 42.3% of 26 students who fell in the category of 24-26 years were not happy. This trend shows that as the age increases the level of unhappiness decreases and level of happiness increases as you grow older there is an improvement in variables that affect happiness level such as eating habits, sleep, social interaction and physical activity. 66.8% medical students were unhappy and 59.8 nonmedical students were unhappy showing that medical students as compared to nonmedical students have higher scores of unhappiness due to various reasons.

**Table I: Demographic variables**

Sr. no	Variables	Categories	Frequency	Percentages
1	Gender	Males	150	42.86
		Females	200	57.14
2	Age	18-20 years	109	31.14
		21-23 years	215	61.43
		24-26 years	26	7.429
		Medical	181	51.71
3	Field of study	Non-medical	169	48.29
		MBBS	181	51.71
4	Department	Mechanical engineering	16	4.57
		Electrical engineering	41	11.71
		Mechatronics	8	2.29
		BBA	18	5.14
		CS	36	10.29
		Humanities	27	7.71
		Physics	6	1.71
		Mathematics	17	4.86

When students were asked about the number of hours they sleep there was an increasing trend of happiness level with increasing number of sleep hours and quality of sleep with p value of 0.05 and 0.00 respectively. Better academic performance had strong association with level of happiness with p value of 0.025. Students who had 3 meals a day were happier as compared to those with lesser number of meals with p value of 0.000. Similarly eating health food showed strong association with happiness level with p value of 0.005.

When students were asked about skipping of the breakfast, those who said they always skipped breakfast 73.7% were unhappy, and out of those who never skipped breakfast 51.6 %were unhappy. There was a trend showing that decreasing the frequency of having breakfast decreases your happiness.

When number of hours spent in physical activity was cross tabbed with level of happiness, those who spent more than 3-4 hours /week in different kind of physical activities were mostly happy as compared to those who spent up to 1-2 hours or less with p value of 0.02, Similarly when increased physical activity showing effect on better grades was cross tabulated with happiness level, p value was 0.003.

Social interaction with family and friends and use of technology with improvement in life also showed strong association with happiness level with p value of 0.000 and 0.001respectively.

## Discussion

In this study, the happiness index of undergraduate students of Air University, Islamabad was calculated using the Oxford Happiness Questionnaire. The association of different variables related to lifestyle with happiness was determined. A study conducted in 2018 in university of Arizona on first Year College students suggested that positive emotions were higher amongst those who chose healthy fruits, vegetables and meat products as compared to those who preferred fast food. Results were similar to our study that strongly suggests that students with healthier food choices were happier. In 2020, a study conducted amongst university students from over 28 countries showed that skipping breakfast was linked to depressive episodes and reduced happiness resulting in a negative impact on overall health.<sup>14</sup> Although our study did not show a statistically significant association between skipping breakfast and happiness level but number of students who skipped breakfast were unhappy. This variation in result could be due to smaller sample size.

The results of a study conducted in Turkey on undergraduate students, indicated that physically active students showed subjectively higher levels of perceived happiness. These results were consistent with the results of our study<sup>15</sup> in which students who spent more hours per week engaging in physical activity were found to be happier than those who did not engage much in physical activity( p-value=0.026).

The level of happiness of an individual is also affected by sleep, a result of a research done on Japanese adolescents indicated that there was a strong association between sleep problems and happiness level of students (linear relationship).<sup>7</sup> Our study shows that those who slept less than 6 hours were linked with low happiness score with p value of 0.05. Quality of sleep also affected happiness level with p value of 0.000. A study on adolescents in 2018, conferred that shorter duration of sleep led to lower positive emotions whereas poor sleep quality was associated with negative emotions and that both negative and positive emotions were necessary in understanding the wellbeing of a person.<sup>16</sup> Our study showed similar results that people with poor sleep quality had mixed emotions which affected their happiness level. Similarly, a study was done on Chinese adults to find the relationship between duration of sleep and insomnia with Happiness, it found that young adults were most affected by short sleep duration; on the other hand, the elderly were affected by Insomnia. Overall, the female gender was found prone to lower levels of happiness due to sleep. <sup>8</sup>

One's academic performance also influences their happiness levels; a study was done on female graduates from Chandigarh India, it found a linear relationship between happiness and academic performance as the value of P was < 0.01 <sup>17</sup>, meanwhile our study showed that those who had good academic score were pretty happy with p value of 0.025. A study was conducted on students of Berkeley Carroll, it suggested that there was no relationship between Grade Point Average (GPA) and Happiness but it stated that students satisfied with their grades on average were happier than those that were not satisfied with their grades. <sup>9</sup>

In a research that aimed to study the correlation of happiness and online media use of the students of West Bengal, the researchers came to an understanding that 1% change in hours spent online by the student can alter significant amount of change in happiness of the student.<sup>18</sup>

These results are consistent with the results of our study. A significant association was found between the use of technology and happiness level of students (p value= 0.001). Moreover, our study also concluded that use of

technology positively affected the happiness level of students as out of 350 respondents, 48.6% of the students who had strongly agreed that technology improved their life were found to be happy with a p value of 0.001.

The variable of social interaction was assessed in study conducted amongst university students across Malaysia showed that due to the COVID-19 pandemic and the subsequent lockdowns, there was a decrease in the amount of social interaction resulting in higher incidence of depression along with reduced happiness levels within the students. In this particular study happiness levels were determined using the Oxford Happiness Questionnaire similar to our study.<sup>19</sup> The result of our study was consistent with this study and suggested that the level of happiness increases when one has more frequent interactions with family and friends with a p value of 0.000. A study conducted in Siena, Italy amongst university students highlighted that being a part of a community and interacting with people there was a significant contributor to one's happiness.<sup>20</sup>

Happiness level of students is strongly associated with important parameters of life including taking 3 or more meals, taking healthy food, interacting with family and friends, quality of sleep, participation in physical activities and one's academic score.

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