



CORRELATION BETWEEN PARAMETERS OF MENTAL WELLNESS AMONG MEDICAL STUDENTS

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ABSTRACT

Mental wellness is an important attribute in today's world. This research evaluated two variables, namely, happiness quotient and state of mindfulness, as indicators of mental wellness in a sample of final-year undergraduate students from a premier medical college in Greater Mumbai. Two standardised tools were used for this purpose. The results showed the following: the students had a mean happiness quotient similar to that reported in the general population; their state of mindfulness was similar to that reported among college students in the West; over one-half of them stated that they were somewhat unhappy or not particularly happy or unhappy (only 10% stated that they were very happy); there was no significant difference between males and females in both the variables; there was a positive relationship between the two variables. The research suggests a need for interventions as part of the curriculum to enhance the state of mindfulness and also happiness quotient in these students.



KEYWORDS : *Mental wellness , premier medical college , Two standardised tools.*

INTRODUCTION

Happiness can be defined in various ways – by momentary events, short-term experiences or by a longer-term perspective. This explains why, in surveys of happiness indices, results are widely different and depend on the questions asked and perceptions of what constitutes happiness.

Mindfulness has been defined as being aware every moment of one's own subjective conscious experience – thoughts, feelings, bodily sensations, and surrounding environment.(1) It is not the same as awareness; for example, a person may be aware he is walking, but not mindful of the experience that goes with it.

Are mindfulness and happiness related? To a large extent, the answer is “yes”. A person mindful of his being and environs is potentially capable of modulating his responses to these, thus contributing to his well-being and happiness.(2) In fact, mindfulness-based interventions have been used in the reduction of worry,(3) and in psychology to alleviate mental and physical conditions.(4,5,6)

The responses in any survey are influenced by several factors, among them literacy and education and an ability to comprehend the intricacies of the survey. Researchers must therefore realise that applying the same survey tool to different populations may not be appropriate. The current survey was undertaken in students pursuing a career in the field of Medicine. Apart from meeting the requirement that such a group is educated and able to comprehend the survey, this group was chosen to reflect future potential leaders in society.

NEED FOR THE STUDY

In India, high status is attached to the profession of Medicine. Unfortunately, entry into this field requires mainly an ability to 'crack' a marks scoring system. Crucial aspects like the aptitude of the learner are given scant consideration when this career is chased. In other words, are all students enrolled in this career truly happy? Students may find themselves in a career that was forced on them by expectant parents. As if this were not enough, the burden of having to later recover the high fees parents pay can alter the student's mental well-being. Thus, although the ability to be mindful may come easier for a segment of people not burdened with day-to-day living requirements (this also needs to be proved), are these students happier? Does the curriculum in these institutions cater to issues of the head, hand and heart? Do the career certifications enhance the student's affective domain?

SIGNIFICANCE OF THE STUDY

With the belief that the country's future is in the hands of the educated, it is important to know how this segment of the population feels about their happiness quotient. There probably has been no survey on mindfulness in India and likely not in such a selected population segment. Since mindfulness-based therapy has been used for a variety of personality and psychological conditions, it is important to know whether a link can be established between mindfulness and happiness in this population.

This study intended to find the effectiveness outcomes of students in Medicine. It intends to assess whether at the end of the long, much-dreamed-of educational journey the students are really happy. Have they achieved the desired state of mindfulness that helps them to experience situations without being judgmental and using their preconceived benchmarks? Is higher education contributing to creating individuals who are self-actualised? Finally, is there a difference between the genders in achieving these outcomes?

The researcher thus surveyed final-year undergraduate students in the field of Medicine from a premier institution in Greater Mumbai. This batch was selected for study in order to maintain as much homogeneity as possible, as well as to assess the full effect of their career as undergraduates in the field.

REVIEW OF LITERATURE

Happiness Quotient

Aristotle (7) sought to answer the question, "What is the ultimate purpose of human existence?" People seek pleasure, wealth, and a good reputation, but none of these is an ultimate end. He claimed that happiness is the end that meets these requirements; all other goods are a means towards obtaining happiness.

A UN World Happiness Report (2015) looked at how people see their lives. It listed the Swiss and the Scandinavians as the happiest people on earth.(8) Westerners generally rate their lives highly because of their overall human development, long life expectancy, and high incomes. At the bottom of the list were countries such as Afghanistan, where war is a part of daily life.

An earlier Gallup poll,(9) which looked at how people *live* their lives, suggested that the Latin Americans were the happiest people in the world, with all ten top spots occupied by countries, including poor ones, from this region. Lowest spots were expectedly held by countries affected by poverty, disease and war.

It appears that the results of surveys on happiness depend on the questions asked. In India, for example, family proximity is generally valued, and distance from family may be a cause of unhappiness. Contrarily, in the US, freedom and individual "space" may be valued.

The Oxford Happiness Questionnaire (10) that was used in this survey was developed by psychologists Peter Hills and Michael Argyle at Oxford University as a scale for the measurement of psychological well-being. This simple and compact questionnaire, which has been derived from the Oxford Happiness Inventory and subsequently validated, asks straightforward and transparent questions and

expects respondents to answer honestly. Apart from the limitations that such scales have (referred to earlier), other points complicate the issue: can a person's actual level of happiness be different from the level he thinks he has? Is the person himself the best judge of his internal state of happiness? Will responses vary from time to time?

State of Mindfulness

Bishop et al.(11) proposed a two-component model of mindfulness: the first involves the self-regulation of attention so that it is maintained on immediate experience. It involves bringing awareness to current experience. The second component involves adopting a particular orientation toward one's experiences in the present moment, an orientation that is characterised by curiosity, openness and acceptance.

However, mindfulness is an emotionally non-reactive state. A mindful person does not judge an experience as good or bad; if he does, he simply notices it and lets go of it. This is called "equanimity" – stillness and balance of mind. Whether it's a pleasant experience or a painful experience, it is treated the same way.

According to Jon Kabat-Zinn (founder of the Mindfulness-Based Stress Reduction Program at the University of Massachusetts Medical Center), left to itself the mind wanders through all kinds of thoughts, including negative ones, usually about the past or future.(12) As we indulge in these thoughts, we reinforce those emotions and cause ourselves to suffer. That does not mean we can no longer think about the past or future, but when we do so mindfully, we purposefully direct our awareness towards our present moment, decrease their effect on our lives, and create a space of freedom where calmness and contentment can grow.

Kabat-Zinn says in his Greater Good video, "Mindfulness is about living life as if it really mattered, moment by moment by moment by moment." His definition highlights that an important aspect of mindfulness is acceptance, or of avoiding harsh judgments.(12)

Seven mindfulness measures have been developed that are based on self-reporting of trait-like constructs.(13) This study used the Mindful Attention Awareness Scale (MAAS).(14)

Mindfulness and Happiness

According to Harvard researcher Matt Killingsworth, we are happiest when we are mindful of the moment, and we are least happy when the mind is wandering.(15) He concluded that what made people happy had far less to do with *what* they were doing and significantly more to do with whether their attention was fully present in the moment. People who focused on their present moment experience ('mindful') were significantly happier than people whose minds wandered away from the moment. The study by Killingsworth shows what traditions have long taught – that the key to happiness depends not on external circumstances but on the state of our minds and the quality of our consciousness. The Hungarian psychologist Mihaly Csikszentmihalyi (16) studied happiness extensively and came up with the same results as Killingsworth.

Four steps have been recommended to achieve mindfulness:(17)

Step 1. Before you begin an activity, pause, take three deep slow conscious breaths. Let the mind be fully engaged in the breath and nothing else for that time

Step 2. Focus all of your attention in the present moment. Pretend for the moment that the past and future do not exist. Be fully present in the now

Step 3. Slowly, with deliberate movements, go about your activity. Make it into a meditative practice but with an intensity of focus

Step 4. Remain alert and keep the mind fully attentive to what you are doing in that moment only – not allowing it to slip off into unconscious mind chatter. If your mind does slip off, guide it back to being intensely engaged in what you are doing

SCOPE AND DELIMITATIONS OF THE STUDY

The study compared final-year students only from Medicine from one institution in Greater Mumbai. It did not include students from other institutions or from regions outside Greater Mumbai.

The study included students of both genders who were compared on the variables.

TOOLS OF THE STUDY

The Oxford Happiness Questionnaire (10) comprises 29 items that can be endorsed on a uniform six-point Likert scale, as:

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = slightly disagree
- 4 = slightly agree
- 5 = moderately agree
- 6 = strongly agree

Twelve of the 29 items are scored in reverse. The average score is obtained by dividing the total score by 29, and is interpreted as:

- 1 to <2 Not happy
- 2 to <3 Somewhat unhappy
- 3 to <4 Not particularly happy or unhappy
- 4 Somewhat happy
- >4 to <5 Pretty happy
- 5 to <6 Very happy
- 6 Too happy

An average score of 4 (somewhat happy) is considered by the authors as representative of the general population. The authors of the questionnaire opine that there is an optimal level of happiness for things, and that being “too happy” may be associated with lower levels of such things.

The trait Mindful Attention Awareness Scale (MAAS) (14) is a 15-item scale designed to assess a core characteristic of mindfulness, namely, a receptive state of mind in which attention simply observes what is taking place, without processing or cognitively manipulating it. The trait MAAS has shown internal consistency levels (Cronbach’s alphas) generally ranging from 0.80 to 0.90. It has demonstrated high test-retest reliability, discriminant and convergent validity, known-groups validity, and criterion validity.(14)

A 1-6 Likert scale is used to evaluate responses about 15 day-to-day experiences. The possible responses are:

- 1. Almost always
- 2. Very frequently
- 3. Somewhat frequently
- 4. Somewhat infrequently
- 5. Very infrequently
- 6. Almost never

The mean (average) of the 15 items is calculated. Higher scores reflect higher levels of dispositional mindfulness.

The researcher conducted a survey on happiness and mindfulness using the Oxford Happiness Questionnaire and the Mindful Attention Awareness Scale in a group of final-year undergraduate students of Medicine from an institution in Mumbai.

OPERATIONAL DEFINITION OF TERMS

Happiness Quotient

Happiness, as measured by the Oxford Happiness Questionnaire,(10) is defined as a state of psychological well-being that is self-sufficient and final, an ultimate end in itself;(7) all other goods are a means towards obtaining this end.

State of Mindfulness

Mindfulness, as measured by the Mindful Attention Awareness Scale (MAAS),(14) is defined as being aware moment-to-moment of one's own subjective conscious experience, of our thoughts, feelings, bodily sensations, and surrounding environment;(1) it refers to paying attention to self in a particular way: on purpose, in the present moment, and non-judgmentally.

RESEARCH QUESTIONS

The study was undertaken with the following research questions:

- What is the Happiness Quotient in final-year undergraduate students of Medicine?
- What is the State of Mindfulness in final-year undergraduate students of Medicine?
- Is there a difference in the Happiness Quotient between male and female final-year undergraduate students of Medicine?
- Is there a difference in the State of Mindfulness between male and female final-year undergraduate students of Medicine?
- What is the direction and magnitude of the relationship between the Happiness Quotient and the State of Mindfulness in final-year undergraduate students of Medicine?

OBJECTIVES OF THE STUDY

The study was conducted with the following specific objectives:

Descriptive

(a) To find the level of Happiness Quotient of final-year undergraduate students belonging to Medicine

(b) To find the level of State of Mindfulness of final-year undergraduate students belonging to Medicine

Causal-comparative

(c) To compare the Happiness Quotient of male and female final-year undergraduate students belonging to Medicine

(d) To compare the State of Mindfulness of male and female final-year undergraduate students belonging to Medicine

Correlational

(e) To find the relationship between Happiness Quotient and State of Mindfulness of final-year undergraduate students belonging to Medicine

HYPOTHESES OF THE STUDY

The following **null hypotheses** were formulated for the study:

1. There is no significant difference in the Happiness Quotient between the genders in final-year undergraduate students of Medicine
2. There is no significant difference in the State of Mindfulness between the genders in final-year undergraduate students of Medicine
3. There is no significant relationship between the Happiness Quotient and State of Mindfulness of final-year undergraduate students of Medicine

METHODOLOGY OF THE STUDY

The study adopted the descriptive method of the causal-comparative and correlational types.

The research included studying students' Happiness Quotient and State of Mindfulness as they exist. It studied these characteristics in the final year, when they will have nearly completed education in Medicine. Hence it is of the descriptive type.

The research aimed at comparing the Happiness Quotient and State of Mindfulness on the basis of gender among final-year undergraduate students of Medicine. Hence, it is a causal-comparative type of research.

The research also attempted to study the relationship between the Happiness Quotient and State of Mindfulness of final-year undergraduate students of Medicine; hence, it is of the correlational type.

Sample

The sample included all 126 students who were present on the day of the data procurement, in the final undergraduate year of their professional course (Medicine: M.B.,B.S.) in an institution situated in Greater Mumbai. Samples included boys and girls; the distribution reflected their respective representation in their classes and stratification was not done for this purpose.

TOOLS OF THE STUDY

The following tools were used by the researcher:

1. Oxford Happiness Questionnaire (10)
2. Mindful Attention Awareness Scale (MAAS) (14)

TECHNIQUES OF DATA ANALYSIS

The following techniques of data analysis were used:

1. Descriptive Statistics, including measures of central tendency and variability
2. Inferential Statistical Techniques
 - i. Student's *t* test for comparison of means between genders
 - ii. Chi square test for comparison of proportions or trends between genders
 - iii. Pearson's correlation '*r*' for relationship between Happiness Quotient and State of Mindfulness

ANALYSIS AND INTERPRETATION

The sample included 126 students (53 girls, 73 boys) in the final year of M.B.,B.S. at the Seth G S Medical College and King Edward Memorial Hospital, Mumbai. All 126 students completed both questionnaires.

Descriptive Analysis

Objective (a). On a scale from 0 to 6, the Happiness Quotient of the Medicine students was mean 4.01 (standard deviation 0.62, standard error of mean 0.055), median 3.97 (range 2.48 to 5.41). The statement that received the highest average score (4.62: Moderately or strongly disagree) was "I don't have fun with other people". No statement had an average score below 3.

Objective (b). On a range from 0 to 6, the State of Mindfulness of the Medicine students was mean 3.82 (standard deviation 0.98, standard error of mean 0.087), median 3.90 (range 1.33 to 5.93). The statement that received the highest average score (4.55: Somewhat or very infrequently) was "I snack without being aware that I'm eating". No statement had an average score below 3.

On the Oxford Happiness Questionnaire scale, the Happiness Quotients in Medicine students was as shown in Table 1.

Table 1. Distribution of Happiness Quotients on the Oxford Happiness Questionnaire scale in Medicine students

Scale	Interpretation	Medicine Students (%)
1 to <2	Not happy	0
2 to <3	Somewhat unhappy	3
3 to <4	Not particularly happy or unhappy	48
4	Somewhat happy	2
>4 to <5	Pretty happy	38
5 to 6	Very happy	9

Causal-Comparative Analysis

Objective (c). The difference in the Happiness Quotient in male (mean [standard deviation] 3.99 [0.64]; median [range] 3.93 [2.48 to 5.41]) and female (4.04 [0.61]; 4.00 [2.72 to 5.24]) Medicine students was not statistically significant ($p=0.325$; Student's t test for unpaired data) (Figure 1). Thus, Null Hypothesis 1 is accepted.

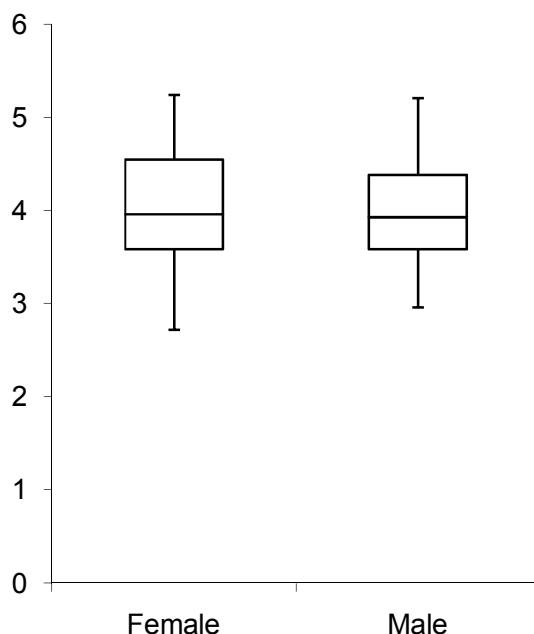


Figure 1. Box-and-whisker plot of Happiness Quotient scores in female and male Medicine students. The graph shows the median and interquartile range values, the minimum and maximum values, and the lowest and highest outlier (if any). There was no difference in the Happiness Quotient between female and male Medicine students

Objective (d). The difference in the State of Mindfulness in male (mean [standard deviation] 3.74 [1.02]; median [range] 3.80 [1.33 to 5.67]) and female (3.94 [0.90]; 4.00 [1.73 to 5.93]) Medicine students was not statistically significant ($p=0.11$; Student's t test for unpaired data) (Figure 2). Thus Null Hypothesis 2 is accepted.

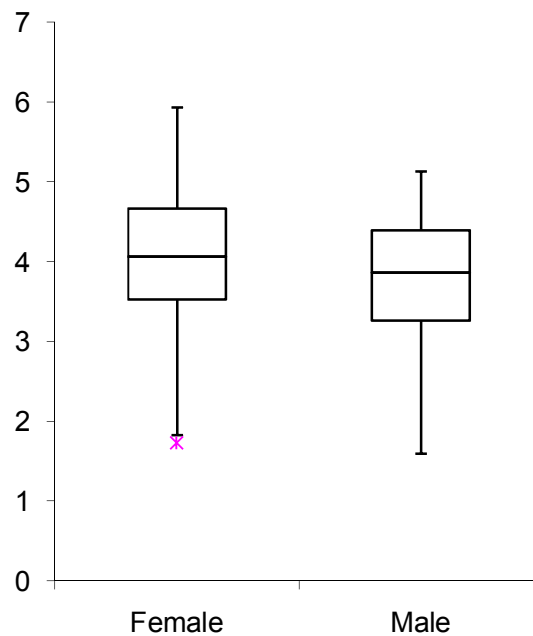


Figure 2. Box-and-whisker plot of State of Mindfulness scores in female and male Medicine students. The graph shows the median and interquartile range values, the minimum and maximum values, and the lowest and highest outlier (if any). There was no difference in the State of Mindfulness between female and male Medicine students

Correlational Analysis

Objective (e). The correlation between the Happiness Quotient and the State of Mindfulness in Medicine students was statistically significant (Pearson's correlation 0.409; $r^2=0.167$; $p<0.00001$) (Figure 3). Thus, Null Hypothesis 3 is rejected.

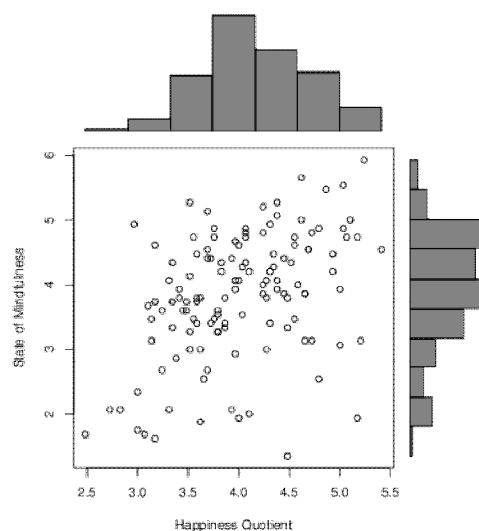


Figure 3. Scatterogram showing correlation between Happiness Quotient and State of Mindfulness in Medicine students, along with histogram of the corresponding values. The correlation was statistically significant

SUMMARY AND FINDINGS

The researcher conducted a survey on Happiness Quotient and State of Mindfulness among final-year undergraduate students of Medicine faculty. The findings are listed below.

- Medicine students had a mean Happiness Quotient of 4.01, which is similar to what has been considered by the authors of the questionnaire as the norm for the general population (4.0).
- Medicine students had a mean score of 3.82 for State of Mindfulness, which is similar to mean scores obtained among college students (3.83) in the West in earlier validation studies by the authors of this scale.
- Whereas no Medicine student stated that they were not happy, nearly one-half (48%) of Medicine students stated that they were not particularly happy or unhappy. On the other hand, only 38% of Medicine students stated that they were pretty happy. Only approximately 10% of students stated that they were very happy.
- There was no difference in the Happiness Quotient between male and female students.
- There was no difference between male and female Medicine students in the mean score for State of Mindfulness.
- The correlation between Happiness Quotient and State of Mindfulness was significant among Medicine (Pearson's correlation 0.409) students.

CONCLUSIONS

Among Medicine students, there was significant correlation between the Happiness Quotient and State of Mindfulness scores, although this was weak. There was no difference in scores between male and female students.

A few disturbing findings stand out. Why do over one-half of Medicine students rate themselves as somewhat unhappy or not particularly unhappy or happy? And why do only about 10% of these students rate themselves as very happy? These are students from a premier-league institution, holding coveted seats and with excellent future projections, at least in common perception. Traditionally, this institution is ranked with the highest in the country and admission to it is highly competitive.

Are the hopes of these students belied by the reality they face with their studies? Is it only the stress associated with upcoming exit examinations in these final-year students? Do they see the future (after graduation) as uphill, especially in an environment where nothing is valued more than financial status? This is especially true for Medicine students for whom postgraduate and even postdoctoral degrees are now considered essential to stand above the average. The latter means an additional six years of studies, even presuming that they obtain admission to these courses at the first attempt in these even more competitive examinations for seats that are unrealistically limited and so open the avenue for widespread corruption.

At informal discussions that the researcher had with the students after completion of the questionnaires, the Medicine students had apprehensions when they look to the future (dwelling in the future is in any case contrary to the state of mindfulness). Apart from the stiff competition, many of them had remorse about being away from home and family for many years, were worried about having to wait to start a family, and realise they have to accept a lower financial status (in addition to being a "burden to their parents") than their peers for many years.

Is there something that needs attention in the marks-only and other recruitment criteria? Why is the State of Mindfulness among Medicine students similar to what has been reported from the general community, although it is similar to that in college students in general, in Western studies? Should interventions be considered as part of the curriculum to enhance their State of Mindfulness and so Happiness Quotient?

FUTURE STUDIES

Wider perspectives on these issues can be obtained from similar studies being conducted in

- other institutions with similar faculties
- institutions with other professional and non-professional faculties
- students from the same institutions but from earlier in the undergraduate course studied as cohorts with prospective follow up

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