

A Cross Sectional Study on Levels of Anxiety in University Students in Kolkata, India by Assessing the Directional Impact of Mindfulness During Their Course of Study

Pragati Sureka^{1*}, Dr. Kriti Sarkar²

ABSTRACT

Students tend to be very anxious. Mindfulness is a scientific notion that has gained popularity across geographies in helping students manage their anxiety. However, most students have very low levels of mindfulness to start with. The reason is primarily a lack of awareness about how daily mindfulness practices, benefit their mental health as daily brushing, benefits their dental health. To address this issue of ignorance, a series of awareness programs about mindfulness interventions to reduce anxiety for emotional wellbeing was held at various colleges. Based on the findings from the data collected, 261 university students were divided into high anxiety and low anxiety group using DASS21. Their state of mindfulness was assessed by using the MAAS scale. The aim of this research study was to assess the levels of anxiety in university students by assessing the directional impact of mindfulness during their course of study. On the basis of data, 2 groups were formed: high anxiety level (n=197) and normal anxiety level (n=64). The directional impact of mindfulness on students' levels of anxiety are promising. These findings pave the way to present a strong case for such mindfulness-based interventions. **Results:** Mindfulness has a negative directional impact on anxiety. Mindfulness scores were low in both groups. Anxiety was found to be alarming in college students, irrespective of their levels of anxieties. Optimal use of the innate presence of mindfulness is not there as elucidated by the anxiety scores of students. Significant difference exists between the anxiety groups, in terms of mindfulness. Further, when it comes to mindfulness, all university students are deemed below average as mean score of both groups is 3.65 (high anxiety level) and 4.0 (low anxiety level), which is below midpoint. This points out that current mindfulness has scope for improvement in both the groups. It is seen that students with higher anxiety have lower mindfulness. **Conclusion:** The directional impact of mindfulness on anxiety is significant. There is a negative correlation between the two. It is recommended that regular Mindfulness Based Interventions (MBIs) are administered to college students during the course of their studies.

¹PhD Scholar, University of Engineering and Management, Kolkata, West Bengal, India. & Research Scholar, Harvard T. H. Chan School of Public Health, Boston, MA, USA.

²Associate Professor, Department of Basic Science and Humanities, University of Engineering and Management, Kolkata

*Corresponding Author

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In recent times, anxiety has earned the ubiquitous sobriquet as the silent killer. Unfortunately, most people think that being anxious is normal, even though they do not like it. The result is that they do not invest enough time in nipping anxiety in the bud. As a result, problems related to anxiety escalate. By the time people realize that they need to take effective steps to curtail it, it is often too little, too late. The good news is that a regular healthy lifestyle that caters to good mental health goes a long way in curtailing anxiety and other psychological issues. University students are a population which is perpetually anxious. They undergo many transitions and changes in social settings. Whether it is academics, peer relationships or their own self-view or career goals in the future, they are constantly worried and have a layer of anxiety about most, if not all their thoughts (Awad, 2022). The way they cope is often maladaptive and detrimental to their health, performance and functioning. Therefore, it is important that they learn healthy ways to mitigate their anxiety (Upsher, 2022).

Mindfulness is a scientific notion that has gained popularity across geographies. It has scientifically shown to be effective with students in bringing down their anxiety levels (Hayes, 1999; Sharf, 2014). It has been defined as “a receptive attention to and awareness of present events and experience” (Brown 2007, p. 212).

The trend of using mindfulness to enhance emotional well-being and cope with various mental health issues has become popular as numerous studies have shown the efficacy of mindfulness in helping people cope with anxiety, depression, stress and improve their mental health and emotional well-being. Students tend to be very anxious. University students, in particular, seem to have an undertone of the malaise of anxiety. Academic challenges, performance-related issues, growing responsibilities, peer interactions, job insecurities and competition are some of the common factors that tend to cast a patina of gloom and create anxiety in most undergraduates. They tend to become mindless and try to push things under the carpet, and this can have disastrous consequences for their emotional well-being and overall functioning (Islam, 2022; Reangsing, 2023).

However, no such initiatives have been formally introduced for undergraduate students in the population that has been studied. While regular mindfulness-based interventions lasting 6 weeks to 3 months have been recommended, most educational institutions find it difficult to include such initiatives in a regular university academic curriculum. The million-dollar question remains, “Can educational institutions in India really afford to neglect introducing preventive mental health measures?” Self-help techniques of mindfulness have been found useful (Kabat-Zinn, 1982; Kabat-Zinn, 1992; Mayo, 2007). The present study highlights the alarming levels of anxiety in students, how mindfulness has a directionally impact and can hence provide effective solutions to control this alarming situation (Ho, 2023).

This study provides a groundwork underpinning to assess the role of levels of anxiety in the directional impact (leading to efficacy) of mindfulness interventions. Some studies have pointed out that for people with existing mental health issues, mindfulness may have adverse effects (Farias, 2020). This factor is crucial to keep in mind as an overly rosy picture may not be a good idea in light of the trend that complete interest in the underpinnings and enhancement of well-being has been burgeoning for 2 decades (e.g., Ryan & Deci, 2001;

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Seligman & Csikszentmihalyi, 2000). While this present research nourishes this trend, it is exploring the impact of levels of anxiety in a way which has not been done before. Checking the directional impact of mindfulness on the basis of levels of anxiety can be deemed to indicate that mindfulness is a reliably and validly measured characteristic which has the potential to play a significant role to play in a variety of aspects of mental health related concerns (**Dvořákov, 2022**). Researchers have conducted a multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. The findings showed that mindful people had more benign stress evaluations, used avoidant coping methods less frequently, and used approach coping more frequently in two investigations (**Weinstein, 2009**).

Knowing the directional impact of mindfulness on the basis of levels of anxiety is helpful in designing and assessing the efficacy of interventions (**Gadi, 2022**). Further research on this (which is beyond the scope of the current paper) can explore alternative models and devise a structural equation model of emotional well-being of undergraduate students (**Seppälä, 2020; Brown, 1993; Brown, 2007**).

Mindfulness is the practise of being present in the moment and focusing one's attention without judgement on one's thoughts, feelings, and surroundings. It has emerged as a useful and viable tool for lowering anxiety (**Hayes, 1999**). It has also demonstrated its efficacy in reduction of stress and tension, among other things. While there has been a lot of mindfulness-based studies and its efficacy on clinical populations for curtailing anxiety, there is a lack of literature on how it impacts undergraduate students and helps them cope with anxiety (**Baer, 2003, 2007**). When students become aware that “Mindfulness-based interventions have multiple components, including mindfulness practice exercises, didactic instruction, and social support,” they become open to imbibing these as part of their regular lifestyle (**Weinstein, 2009**). Consequently, they have less anxiety and are less prone to anxiety related disorders. Additional positive well-being consequences include happiness, emotional well-being, better regulation of their own emotions, stress management and have better academic results (**Larson, 2000; Bishop, 2002**). Using scales that they relate to is important as that facilitates self- reflection and collection of good fit data. The MAAS scale has items which facilitate self-reflection, such as:

- “I find it difficult to stay focused on what’s happening in the present.”
- “I do jobs or tasks automatically, without being aware of what I’m doing.”

Anxiety can be described as apprehension of the future, a state of constant worry, a chain of thoughts and images, negatively laden, which usually has no specific stimulus. It means the state of an individual trying to problem-solve more than one possible uncertain outcome of an issue which is mostly uncontrollable and negative. If anxiety is not checked in time, it can become a disorder. Disorders require clinical interventions and regular healthcare support, which in turn need financial and other resources. Most governments and institutions are already struggling to provide with basic mental health care centres and facilities to their people across geographies. Some researchers have pointed out that anxiety disorders are the most common type of diagnosed mental health condition. Timely psychological interventions for high-risk populations like those with high levels of anxiety are beneficial (**Linehan, 1993**). Timely mindfulness intervention for university students can stop anxiety from becoming an anxiety disorder in the lives of many (**Sarfraz, 2023**).

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The findings have wide ramifications as they show that the time has come to devise proper structural equation models. The need of the hour is Mindfulness Based Interventions (MBIs) which solve this issue effectively. Studying the directional impact of mindfulness on anxiety is a step towards this. Further, it has the scientific underpinning to create a paradigm shift towards preventive mental health care of university students (from a diagnosis and curative one). A lot of resources could be saved, with this preventive approach. Regular, effective mindfulness-led interventions for college students can alter the emotional well-being landscape of universities. (**Brown, 1993, 2003; Reangsing, 2023**).

Indigenous university students have significant rates of anxiety and depression, owing to the long-lasting effects of colonialism, racism, and discrimination. The levels of anxiety in students in the post epidemic era remains a global mental health concern. COVID-19 has affected the lives of millions of individuals, having a significant impact on college and university students directly as well as indirectly (**Gandhi, 2022; Gadi, 2022**). There is evidence for the effectiveness of Mindfulness-based interventions (MBIs) in university students during the COVID-19 epidemic in a systematic review and meta-analysis (**Wynaden, 2013; Reangsing, 2023**).

Another study which examined the 3-month effects of a mindfulness-based intervention on first-year college students discovered usage of mindfulness practises following the intervention (between the post-test and the follow-up) and recommended MBIs in universities (**Dvořáková, 2022**).

Objective

The aim of the present study was to assess the directional impact of mindfulness on the levels of anxiety in university students during their course of study.

Implications

The positive outcomes of mindfulness-based interventions for students' levels of anxiety are promising (**Dvořáková, 2022**).

To prevent adverse effects in university students, proper screening is important to demonstrate the efficacy of mindfulness as well as MBIs. Studies which investigate adverse effects of mindfulness show that efficacy of MBIs may be low in clinical populations. No such adverse effects were reported for university students (**Baer, 2016; Farias, 2020; Cebolla, 2017; Britton, 2019; Reangsing, 2023**). The investigation of adverse effects, boundary conditions, and factors that may modulate mindfulness intervention safety and outcomes have shown that using standardized tests like DASS21 help researchers in accurately determining whether the interventions can be generalized without potential adverse consequences (**Baer, 2006**). Further, university students needing clinical interventions are identified timely, who can then seek help, as needed. Student safety is maintained as, if needed, such students may be excluded from MBIs (**Larsen, 2000; Britton, 2019; Lindahl, 2017**).

Some studies that have investigated the long-term effects of such interventions in students, the most effective delivery method, and their impact have found them replicable, useful and generalizable. (**Montero-Marin, 2022; Reangsing, 2023**).

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Additionally, mindfulness-based interventions as a curriculum initiative have been found to be rewarding (Weinstein, 2009).

MATERIALS AND METHODS

Sample

261 full-time students enrolled across 3 universities, ranging in age 18-25 years (Mean=22.5), were divided into 2 groups: High Anxiety (n=197) and Low Anxiety (n=64). The Purposive Sampling method was employed.

Tools: Measures:

Two measures were used in this study:

- 1. MAAS scale:** The 15-item self-report measure assesses the link between mindfulness and various psychological constructs. Statements in the scale can scientifically measure the directional impact of mindfulness.
- 2. Depression, Anxiety and Stress Scale - 21 (DASS-21):** The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Only the anxiety subscale was used for the present study.

Procedure

After getting the requisite permissions from college authorities and informed consent from students, an awareness session was held with only the first 100 willing students in that particular college. The participants of that awareness session were sent the google forms comprising the scales and demographics. Responses were collected on the spot. Afterwards, scoring was done followed by interpretation and conclusion.

Statistical Analysis

Statistical Analysis was done through IBM SPSS V26. Descriptive statistics like Mean and SD, t-test and regression analysis were applied.

DATA AND RESULT

Table 1: t-test for mindfulness across the anxiety groups

| Group | N | M | SD | t | df | p |
|--------------|-----|-------|-------|--------|--------|---------|
| High Anxiety | 197 | 3.653 | 0.508 | -3.339 | 80.268 | 0.001** |
| Low Anxiety | 64 | 4.007 | 0.798 | | | |

** $p < 0.01$

Significant difference exists between the high and low anxiety groups, in terms of mindfulness. The low anxiety group has higher mean mindfulness score.

Table 2: Correlation between Anxiety and Mindfulness

| N | r | p |
|-----|--------|--------|
| 261 | -0.125 | 0.043* |

* $p < 0.05$

A negative correlation exists between Anxiety and Mindfulness, which is statistically significant.

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Table 3: Regression analysis involving Mindfulness as the predictor and Anxiety as the criterion

| Predictor | b | SE | β | t | p | 95% C.I. | |
|-------------|--------|-------|---------|--------|--------|----------|--------|
| | | | | | | Lower | Upper |
| Mindfulness | -1.962 | 0.964 | -0.125 | -2.035 | 0.043* | -3.862 | -0.063 |

* $p < 0.05$

Mindfulness significantly predicts Anxiety with a negative directionality.

RESULTS

When it comes to mindfulness, all university students are deemed below average as mean score of both groups is 3.65 (high anxiety level) and 4.0 (low anxiety level), which is below midpoint. This points out that there is scope for introduction and generalizability of MBIs for higher mindfulness for all students, across groups, to reduce their different anxiety levels. It is also seen that students with higher anxiety have lower mindfulness.

There is a significant difference in the 2 groups. Low anxiety group has higher mindfulness. The findings are significant at 0.05 level. A negative correlation exists between Anxiety and Mindfulness, which is statistically significant.

CONCLUSION

In the present scenario, both groups of university students have low mindfulness. This situation is alarming. So, there is a need for Mindfulness-Based Interventions (MBIs) to be effectively administered to university students during the course of their studies to reduce anxiety. Mindfulness significantly predicts Anxiety with a negative directionality.

Limitations

The study was done with students from 3 colleges only. Funding and other constraints were there which prohibited the researchers to carry on the study in other colleges. Further work in this area, requires financial resources to undertake large scale replications with vigorous methodology, to establish the benefits of mindfulness-based intervention for university students.

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Conflict of Interest

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