

## Being Mindful: A Pilot Study on Brief Online Mindfulness Training and its Effect on Students

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### ABSTRACT

The COVID-19 pandemic and lockdown had created unprecedented disruption to everyone's life. Student's life had also been affected immensely by this pandemic, lockdown and new-normal situation. Researches prove that mindfulness training enhances mental and physical well-being of a person. In this backdrop present pilot study aims to understand whether web-based mindfulness training is effective and feasible in dealing with such problems that students face during the COVID-19 pandemic situation. This is a qualitative study and phenomenological approach is adopted in this study. Total 30 participants (post-graduate students), age (20-25 years) were selected from the students population of Salesian College, Siliguri Campus, West Bengal, India. Purposive sampling techniques were utilized in this study. In online mode students were trained in mindfulness meditation techniques for a period of one month. By transcribing the feedback from participants and finding emerging and recurring themes analysis was performed. The results were divided into two key areas, themes and sub-themes. Two key areas were main effect of training and mechanism of action. The results reflect that students were feeling more focused and concentrated after undergoing the training. Participants also reported reduction of anxiety, feeling relieved during stressful situation. Training enhanced the feelings of positivity within the students. This web-based mindfulness training helped the participants to enhance the physical and mental well-being even in this disruptive and uncertain pandemic situation.

**Keywords:** *Web-based Mindfulness training, Well-Being, Concentration, Positive feelings*

The COVID-19 outbreak and lockdown has tremendously affected every sphere of life. The pandemic has spread a sense of fear and anxiety and has led to both short term as well as long-term implications on the students. Transition from one phase to another is never easy, adapting to the "new-normal" such as, online classes, open book exams etc., becomes particularly difficult in a country like India where the concept of online education is not as mainstream (though there are oasis of excellence) as compared to the Western counterparts.

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A plethora of research on mindfulness has shown its effectiveness in improving mental and physical well-being (Sirois & Tosti, 2012). Dispositional and state mindfulness has shown to predict self-regulated behavior and promote positive emotional state (Brown et al., 2003). Study By Critelli et al., (2011), that has examined the relationship between mindfulness and physical and psychological health suggests that high levels of mindfulness positively correlates with better cardiovascular health and psychological health. Although research involving mindfulness effects on young students may not be as extensive as those on adults and the clinical population, a growing body of research suggests that mindfulness training is worth being practiced.

Mindfulness Training and Meditation practices have become popular across the world in the background of the appreciation for Yoga, and Eastern Meditative techniques like the Transcendental Meditation (TM) that became popular in the 60s in the US and earlier in Europe (Lourdes, 2016). Mindfulness more specifically refers to the Vipassana Meditation that survived from the Buddhist era especially in the Buddhist country of Burma (Myanmar) and from there to India in the 60s through SN Goenka and from there to the West. An adaptation of this tradition as imbibed from the Sadhana Institute, Lonavla and practiced for over two decades by the present instructor is what is more specifically meant by the Mindfulness in this study.

Researches that have been conducted to study the effect of mindfulness have also shown observable positive changes in young people. Young people and adolescents practicing mindfulness have shown to experience a greater sense of well-being as there is a significant positive correlation between mindfulness and positive emotions (Miners, 2008). Furthermore, mindfulness also often improves attention, perception and adaptation and is capable of addressing problems of cognition and performance skills. Besides these additional benefits of practicing mindfulness include improved well-being, calmness, relaxedness, improved sleep, and self-awareness (Wall, 2005; Broderick & Metz, 2009).

Mindfulness training on adolescents diagnosed with learning disability has shown a decrease in state and trait anxiety, and improvement in academics and social skills (Beauchemin, Hutchins & Patterson, 2008). A modified 8 weeks Mindfulness based Stress reduction course on 4 – 18 years old with different diagnoses showed a reduction in anxiety symptoms, depression and somatic concerns in addition to increased self-esteem and global assessment of functioning (Biegel et al., 2009). The transition from offline class to online, absence of face-to-face interaction during lecture, and lack of traditional classroom socialization has had an impact on the lives of students.

The main concern lies in the fact that, although mindfulness training over the years has proven to be effective in improving quality of life both mentally and physically, will this method of a brief web-based mindfulness intervention be feasible and effective in dealing with problems that students face during the pandemic? Thus, this pilot study aims to understand and analyze this question. The investigators adopted a qualitative, phenomenological approach in this pilot study.

## **METHOD**

### *Participants*

The current study has a total sample size of 30 participants age ranging from (20 – 25 years). The sample was selected from the population of students belonging to Salesian College, Siliguri Campus using purposive sampling technique. Previous study by Joseph et al.,

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involving both undergraduates and post-graduate students had shown underlying feelings of boredom and anxiety among students. The present study includes the post-graduate students as the sample and is primarily a focus group study.

### *Procedure*

Previous research on the psychosocial impact of lockdown on students of Salesian College has shown that most students experienced feelings of boredom and anxiety (Joseph et al., 2020). The students were then trained using mindfulness meditation techniques for a period of 1 month (6<sup>th</sup> January – 6<sup>th</sup> February, 2021). The technique consisted of a focused, centered, sitting observing one's own natural normal breathing followed by the observation of the body sensations, feelings and thoughts in full and total awareness, non-judgmentally and equanimously by a select group under the direction of an instructor for a duration of 40 minutes. The mode of training was online. After each week's session the students were requested to give feedback in the form of an interview which was transcribed and then qualitatively analyzed.

### *Mindful Breathing Practice*

The use of one's breath as an anchor to create attentive awareness is referred to as mindful breathing. The technique involves self-monitoring in which a person fully engages in the present moment by noticing the continuous flow of his/her breath exchange (inhaling and exhaling). Numerous studies have consistently linked mindful breathing to improved attentional control and self-regulation, as well as positive and relaxed inner state (e.g., Cooper et al., 2003; Larson et al., 2013), even when participants were engaged in demanding cognitive tasks (e.g., Bing-Canar et al., 2016).

### *Mindful meditation practice*

Mindfulness meditation has, in its traditional version of SN Goenka, three basic components: first, the Anapana (breathing), second vipassana (observation of body sensations) and third, metta (disseminating positive thoughts or well-being towards all beings). Thus, mindfulness meditation has two components: mindful breathing and mindful observation of body sensations. It could and does also have a third component of positive thoughts being disseminated as a goodwill gesture towards all beings. Illustrated below is the mindful meditation practice that was employed in the present study and can be utilized by individuals in their daily lives.

<b>Steps</b>	<b>Description</b>
Step 1	The preliminary preparations of choosing a "silence zone" with least external distractions: be it in the home, room, or an external space with adequate privacy; having the network connections and equipment for audio/video session; and the possibility of doing it in the same space every day. The instructor reminds the participants each day about the need to choose the ideal space. Few moments are set aside daily for settling down in one's chosen space and arriving into the appropriate and comfortable and yet steady posture.
Step 2	The instructor each day emphasizes the need for taking a comfortable, relaxed and yet steady posture and deciding to stick to the chosen posture for the duration of the mindfulness meditation. The choices related to the time and the set duration for the focused attention is a prerequisite for the 'meditative experience'.

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Step 3	The instructor invites the participants to enter into the meditative process, having ensured the attention and focused sitting of the participants. Becoming consciously aware of the normal, natural breathing process: inhaling and exhaling and observing the texture of the breath and the nasal area impact the air contact makes while inhaling and exhaling. (This step could be for a duration of 8-10 minutes) The instructor in different variations reminds the participants twice or thrice to be focused with their entire attention on the breathing process - inhaling and exhaling and observing the nasal area for whatever surfaces as an awareness of the texture of the air being inhaled and exhaled.
Step 4	Shifting attention to the bodily sensations from the crown of the head to the tip of the toes: a conscious choice based fully attentive process of scanning the body frame with the focused mind inch by inch, observing any sensations that may surface, be it pleasant or unpleasant, subtle or gross, short-lived or prolonged. (This step could be for a duration of 15-20 minutes; the process of moving from head to foot and foot to head to be repeated with awareness)
Step 5	At any stage of the meditative sitting, if unavoidable movements are required, they are done with utmost attentiveness; and one returns to the concerned stage of the process of sitting be it step 3 or 4. The instructor repeats the instructions for keeping alive the flow of attention at different steps of the process. Non-judgmental, neutral observance of the actual happenings on the body frame as sensations, the resultant feelings evoked and the thoughts that may fleet across the mind, with full attentiveness of the steadily postured self-observer, that is, the meditator.
Step 6	The sitting is concluded with a period of positive vibrations being sent out from the comfort and peaceful serenity of oneself to all those who have been beneficial and friendly to oneself, to all those who harbor ill will toward oneself and to all beings - be they human, living and or non-living. (This step could be for a duration of 2-5 minutes). At the close of which the instructor invites the participants to gently open their eyes. Feedback on the experience of the day by way of comments or as chat box descriptions was elicited, without any compulsion.

## RESULTS

The analysis of the present study was conducted by transcribing the feedback from students and finding emerging and recurring themes. Research on mindfulness proves that it is related with psychological and social well-being. On this backdrop the main aim of this pilot study was to determine the effect of brief online mindfulness training on college students, who in the previous study had reported underlying feelings of boredom and anxiety (Joseph et al., 2020). After the administration of brief sessions of online mindfulness training the students reported their feelings and experience through interviews. The resulting analysis was divided into two key areas, themes and sub themes, which were as follows: i) participants view on the main effect of training, and ii) mechanism of action.

Key Areas	Theme	Sub - Theme
Main effect of training	Cognitive Effect Emotional Effect Somatic Effect	Concentration/Focused/Attention Happiness / Peace/ Positivity Relaxation/ Healing
Mechanism of Action	Bodily and Mental Awareness	Calm/ Relaxation

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### Key Area 1. Main effect of training:

On the cognitive level, the participants reported that practicing mindfulness helped them increase attention and concentration leading them to be more focused. For example, “it helps one to stay more calm and composed and also helps to stay focused”, “it helped me to relax and concentrate.” Additionally, the participants also perceived to achieve concentration and attention through mindfulness meditation practices (e.g. “I am willing to participate because I want to concentrate and have focus on something”, “I am willing to participate to improve my concentration”).

Effects reported and perceived on an emotional level were feelings of happiness, peace and positivity (e.g., “My first thought when I hear about meditation is peace and relaxation” – S3, “The experience of mindful meditation practice was very peaceful”- S3, “It gave me peace and joy”- S7, “Helps us be optimistic towards life”- S2). Mindfulness training has also significantly enhanced the participants' experience of inner peace (Liu et al., 2013) and also shown to improve attention-related behavioral responses by enhancing functioning of specific subcomponents of attention (Jha, Krompinger & Baime, 2007).

On a somatic level, participants reported the greatest benefit as feelings of relaxation and healing. For e.g., “I felt relaxed during stressful times and it has been my healing remedy” – S9.

### Key Area 2: Mechanism of Action

Conscious breathing and body relaxation along with attentional shift to the present moment helped participants feel relaxed and calm (e.g., “Very pleasant to be part of collective consciousness – relaxed, composed and togetherness” – S5, “It was relaxing, was able to focus on my breathing and heartbeat. It felt like the negativity within me was being washed away and was being surrounded by positive energy” – S9). Relaxation is among one of the recurring themes that emerged in the study. It was reported that it helps them to think in a more constructive way than before and also it helps them to overcome their humdrum routine. Mindfulness based stress reduction techniques have proven to be significant in improving relaxation and positive emotions. Studies on mindfulness meditation and relaxation has shown a lower level of anxiety and ability to devote more attention (Droit-Volet et al., 2015). Mindfulness training has also been associated with improvement in sleep quality, alleviating insomnia and better quality of life (Garcia et al., 2018).

The following figure 1 represents the participants experience of the effects that they reported. The flowchart depicts the flow of awareness through the different domains such as cognitive (thoughts), emotional, and somatic.

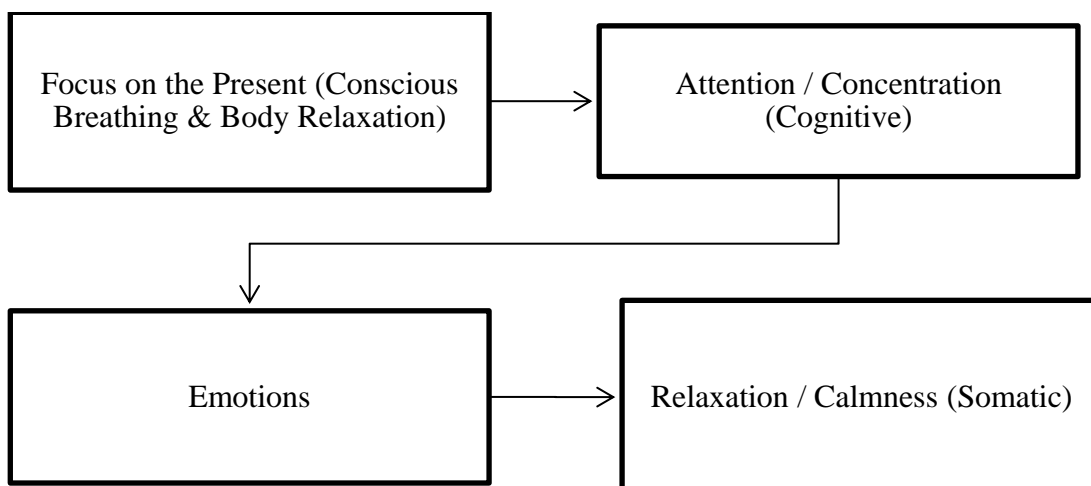


Figure 1. Flowchart depicting the effect of mindfulness training practices on the participants.

## DISCUSSION

The aim of the present work was to explore the effect of a brief web-based mindfulness intervention in dealing with student's problems such as stress, anxiety, boredom etc., several meaningful results have been observed. Firstly, when these easy, effective, and low-cost evidence-based practices such as mindful meditation are followed in the classroom, a calm environment can be produced. Mindfulness improves awareness and strengthens executive functions, fosters strong visualization, and supports invention and intuition, in addition to boosting empathy and compassion. When a calm setting is created jointly, it stimulates concentrated attention and a sense of well-being, which is ideal for deep learning. (Kane, 2017).

Secondly, the study intended to explore the cognitive impact of mindfulness on students. The findings suggest that students report feeling more focused and concentrated following the mindfulness meditation training. Researches provide preliminary evidence for such findings. Significant benefits of mindfulness training were observed when investigating by means of properly delivered meditation programs (Chambers et al., 2008; Jha et al., 2007) or under relaxed conditions (Tang et al., 2007). Exceptionally, attention switching showed no improvement or benefit through mindful meditation practices (Anderson et al., 2007; Chambers et al., 2008; Heeren et al., 2009).

Third, the study results suggest a reduction in anxiety, healing remedy during stress and feelings of positivity. Previous researches have shown that anxiety, sadness, and pain ratings have all improved in systematic studies of mindfulness-based activities. People who have practiced conventional meditation for a long time, as well as those who have completed mindfulness-based stress reduction programme, have shown structural and functional changes in their brains. Different populations across the lifetime and ability range benefit from mindfulness and meditation techniques (Behan, 2020). Children who exercised mindfulness exhibited a considerable increase in calmness, according to studies (Nadler, Cordy, Stengel, Segal & Hayden, 2017).

A mobile audio-guided mindfulness meditation program is an effective means to decrease perceived stress in medical students (Yang, Schamber, Meyer, & Gold, 2018). Female medical and psychology students experienced significant positive improvements in mental distress, study stress, subjective well-being and mindfulness after participating in the MBSR programme (De Vibe et al., 2013). In this study also students reported that it's an antidote for them when they feel stress during this pandemic situation and online education.

Contrary to the effectiveness of online mindfulness reported by these researches, Danilewitz et al., (2018) reported that an online mindfulness meditation programme did not result in any changes in the level of burnout and empathy among 52 medical students who were recruited in the study.

The findings of the present study should be considered within the context of the following limitations. Firstly, limitation of the study is that data were collected from a relatively small sample size. Thus, the study may not be generalized to the entire population. A larger and diverse sample size would have given the research a much more generalizable answer. Secondly, the data was collected using a purposive sampling technique which may have also influenced the result. Finally, web-based mindfulness may not have been as effective and a face-to-face session may have been able to produce more substantial and powerful results.

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The COVID-19 crisis has affected the lives of billions of people over the world. Strict measures were adopted to curtail the spread of virus thus leading to nationwide lockdowns and social isolation which have negatively impacted the lives of many individuals including young students. Thus, the mindfulness practices illustrated in this study have proven to be a novel beginning to the students participating in this study, who have been able to utilize these mindfulness meditation practices as a tool to gain a sense of tranquility while simultaneously enhancing their physical and mental well-being.

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***Conflict of Interest***

The author declared no conflict of interest.

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