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Use of a mindfulness application to promote students' mental well-being during COVID-19-era

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1 | PROBLEM

With the spread of COVID-19, the effect of lockdown on psychological well-being has been profound. All parts of the world, including educational institutions, have adopted strict isolation strategies. These situations posed a threat to the students' mental health. Mental health is a social determinant that is often ignored and underestimated. Besides, dental students endure the pressures of an academically challenging degree combined with high contact hours, making them vulnerable to burnout.[1]

Many dental students at SEGi University expressed stress and anxiety, affecting their studies during the mentor-mentee sessions. The most common concern was isolation, the lockdown's unpredictability, and its implications on their immediate future. To overcome the anxiety, we attempted to incorporate app-based meditation into the students' learning time to improve their resilience and decrease stress toward unforeseeable circumstances.

2 | SOLUTION

Mindfulness meditation, through a conscious and deliberate focus on the breath, a bodily sensation, a sound, or a word, brings in greater awareness and clarity. Resilience is essential for helping dental students by adapting them positively to uncertainties, fostering effective coping strategies, improving well-being, and enhancing their professional growth.[2] However, an essential component of well-being is the absence of psychological distress (Figure 1).[3]

FIGURE 1 Interrelationship between constructs of mindfulness, resilience, and stress

Year 1–5 dental students ($n = 218$) consented to participate in this study. The mean age was 21.4 ± 1.8 years. 41.3% were males, and 58.7% were females. Medito is a free application that provides formal guided and unguided mindfulness meditation, including mindful breathing and meditation for various situations.[4] All students were advised to download the application. The meditation session was incorporated into the timetable every week for a month. Before using any other functions, participants needed to complete a 10-min, 10-day introduction to mindfulness.

3 | RESULTS

We examined the number of sessions and the type of content they accessed for 1 month. Participants completed

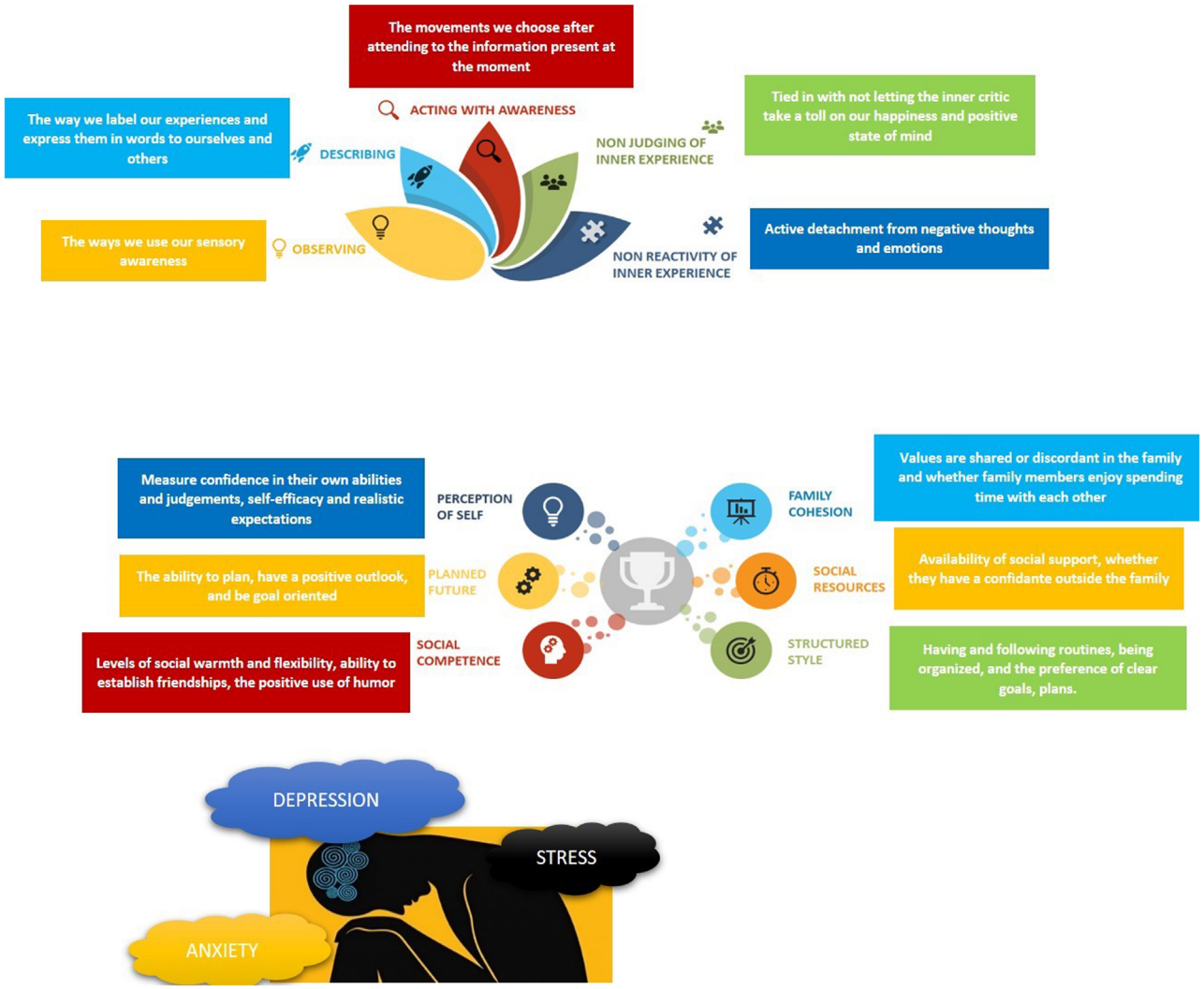

FIGURE 2 Various facets of FFMQ-15, RSA-33, and DASS-21

online forms of the Five Facet Mindfulness Questionnaire-15, the Resilience Scale for Adults-33, and the Depression Anxiety Stress Scale-21 (Figure 2) at baseline and after 1 month post-intervention.[5-7] Additionally, an open feedback was obtained from all via Zoom regarding their mental health status. Data revealed that 91.9% of participants were highly distressed at baseline, which negatively correlated significantly with mindfulness ($p = 0.02$) (Table 1). Interestingly, there was no significant difference between males and females at baseline in relation to stress, resilience, and mindfulness.

At 1 month, a significant negative correlation was seen between stress and mindfulness as well as resilience, and a significant positive correlation between resilience, its six facets, and mindfulness ($p < 0.001$) (Tables 1 and 2). Subsequently, the pre- and post-test data revealed a significant difference in students' stress, resilience, and mindfulness before and post-meditation sessions after 1 month (Figure 3). Furthermore, there was a significant difference in females' total resilience ($p = 0.03$). Students mentioned a heightened awareness of thought patterns, positive emotions, and reactivity levels.

TABLE 1 "Pearson's" correlation (r) between mindfulness, stress, and resilience among students ($n = 218$) before and after using Medito

		Stress	Resilience	Mindfulness
Before meditation	Stress			−0.14*
	Resilience			
	Mindfulness			
After meditation	Stress		−0.89**	−0.43**
	Resilience			0.47**
	Mindfulness			

Note. *. $p < 0.05$, **. $p < 0.01$.

The current generation is technology-friendly, and the same platform can be used to perform remote

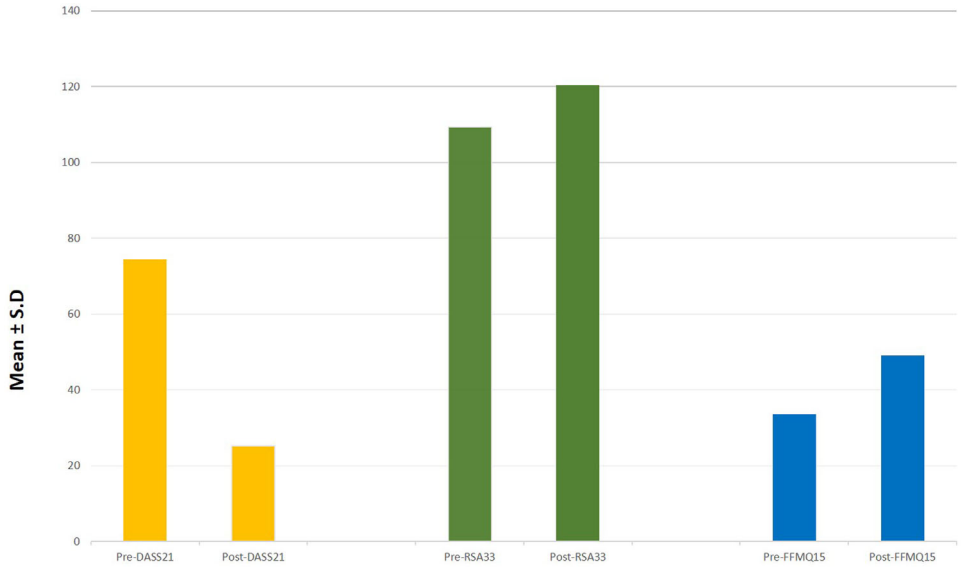

FIGURE 3 Pre and post-test data comparison of stress, resilience, and mindfulness using paired *T*-test with app-based meditation

TABLE 2 "Pearson's" correlation (*r*) between mindfulness and the six facets of resilience among students ($n = 218$) after using Medito

Facets of resilience	Mindfulness
Perception of self	0.39**
Planned future	0.2**
Social competence	0.47**
Family cohesion	0.2**
Social resources	0.44**
Structured style	0.16*

Note. *. $p < 0.05$, **. $p < 0.01$.

psychological support. Emerging research has proven that app-based meditation may improve students' stress symptoms.[2,8] Apps are no substitute for psychotherapy. Even so, it may temporarily benefit students' mental well-being. Formally, encouraging app-based mindfulness can be a new chapter in interprofessional dental education.

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