

Introduction & Background

In 2010, 82% of medical students reported at least one form of distress such as burnout, poor quality of life, and/or depression¹. Since then, 49% of medical students particularly experienced burnout². Although prevalence remains, a more recent study reported the number of medical students experiencing burnout had dropped to 44%³.

A mindfulness practice can help students build resilience by effectively addressing physiological, psychological, and sociological challenges⁴.

It can be difficult to deliver such training face-to-face, particularly with medical students because their time is valuable and limited. Therefore, “Mindfulness training delivered via self-guided smartphone app may offer a convenient alternative to group sessions”⁵.



HeadSpace is a mobile app that guides users through the essentials of meditation and mindfulness using a library of guided meditations, animations, articles, and videos.

- In early 2019, The Joe R. & Teresa Lozano Long School of Medicine (LSOM) partnered with the HeadSpace mobile application to offer complimentary annual memberships to 100 randomized students (MSI – MSIII).
- Memberships were distributed for 10 weeks until all were accepted.
- The final pilot group reported *reduced stress* as the primary reason to try HeadSpace, followed by *improved mood* (See Table 1).
- HeadSpace provided LSOM with *HeadSpace by UT Health*, which included marketing materials and an online dashboard to manage memberships.
- Seven to nine months after membership activation, students were surveyed to determine if their usage experience was valuable.

Table 1: What students hoped to gain from using HeadSpace app (n=101)

Reduced stress	98%
Improved mood	83%
Improved cognitive skills/focus	82%
Improved productivity	78%
Improved ability to be present	73%
Improved response to challenging situations and/or conversations	65%

HeadSpace Distribution Process

Annual HeadSpace memberships were offered at random to 100 medical students (Years 1-3). Fourth year students were not included in the pilot because distributions were done in March, making it difficult to follow up with them after graduation. Students were given a one-week deadline to accept the invitation and complete a pre-intervention survey. Questions included whether students had tried meditation before, what kind they had tried, and what areas of their lives they hoped to improve. Any remaining unused memberships at the end of the week were redistributed at random. This process continued until all memberships were accepted. The final pilot group consisted of 38 first-year students, 35 second-year students, and 27 third-year students.

Table 2: Outcomes of HeadSpace Use (n=21)

	Used app <4x/week (n=11)			Used app ≥4x/week (n=10)			p value
	Disagree	Neutral	Agree	Disagree	Neutral	Agree	
Improved relationships at work and/or home	9%	18%	73%	10%	10%	80%	.594
Improved response to challenging situations and/or conversations	9%	0%	91%	0%	0%	100%	.212
Improved cognitive skills/focus	0%	27%	73%	10%	0%	90%	.291
Reduced stress	0%	0%	100%	10%	0%	90%	.236
Improved mood	0%	0%	100%	0%	0%	100%	.816
Improved ability to be present	9%	9%	82%	0%	10%	90%	.136
Improved productivity	18%	9%	73%	0%	20%	80%	.499

*Disagree =1-3; Neutral=4; Agree=5-7 on a 7-point scale

Outcomes

Depending on when the HeadSpace membership was activated (between 7-9 months), students in the sample were asked to complete a survey measuring their experience with the HeadSpace app; response rate was 84%. 75% of pilot students indicated they used the app at first but then decreased use because they forgot to use it.

- Satisfaction rates for students who completed survey, regardless of frequency and length of use, was 92.3% satisfied, 7.7% neutral, and 0% dissatisfied.
- Of the 21 students who continued to use the app, at the time of survey, reported improvement in many areas (See Table 2).
- It is important to note that an open-ended question in the follow up survey asked if students saw improvements in other areas not listed. 50% of continued users (n=21) reported improved sleep quality using the app’s *Sleepcast* features.

Limitation and Future Focus

- A limitation of this evaluation was the small number of students who continued use.
- Students already familiar with mindfulness may have been more willing to participate.
- The Joe R. & Teresa Lozano Long School of Medicine purchased another 350 memberships to be distributed to all students (year 1-3), on a first-come first-serve basis in the spring 2020. Future data analysis is necessary to compare usage groups and explore other findings.

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