




There Is No Performance, There Is Just This Moment: The Role of Mindfulness Instruction in Promoting Health and Well-Being Among Students at a Highly-Ranked University in the United States

Deanna Kerrigan, PhD, MPH¹, Victoria Chau, PhD, MPH¹, Melissa King, PhD, M.P.Aff¹ , Emily Holman, MHS¹, Alain Joffe, MD, MPH², and Erica Sibinga, MD, MHS³

Abstract

Mindfulness-based stress reduction (MBSR) has been shown to improve health outcomes across populations. We explored the feasibility, acceptability, and initial effects of a pilot MBSR program at a highly-ranked university in the United States. We conducted 23 in-depth interviews with 13 students. Interviews explored stressors and coping mechanisms, experiences with MBSR, and its reported impact and potential future use. Interviews were analyzed using thematic content and narrative analyses. Results indicated that students are exposed to a very high level of constant stress related to the sheer amount of work and activities that they have and the pervasive surrounding university culture of perfectionism. MBSR offered an opportunity to step back and gain perspective on issues of balance and priorities and provided concrete techniques to counter the effects of stressors. We conclude that MBSR and mindfulness programs may contribute to more supportive university learning environments and greater health and well-being among students.

Keywords

mindfulness, stress, young adults, perfectionism

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Mindfulness is described in Buddhist teachings as a means of realizing freedom from suffering through the contemplation and experiencing of thoughts, emotions, and bodily sensations, whether they are pleasant, unpleasant, or neutral in nature.¹ Now more than 2,500 years since mindfulness was first described in Eastern contemplative traditions, one of the most widely-used definitions of mindfulness in the West comes from Jon Kabat-Zinn, founder of the mindfulness-based stress reduction (MBSR) program. He describes mindfulness as “paying attention in a particular way; on purpose, in the present moment, and non-judgmentally.”²

Mindfulness-based interventions have been implemented in a variety of populations and settings and have generally been found to have a positive impact on health and well-being.³ Three separate meta-analyses have demonstrated the positive effects of mindfulness meditation programs on mental health outcomes, including anxiety and depression.⁴⁻⁶ Mindfulness programs have also been shown to be effective in reducing stress⁷⁻⁹ and substance use,^{10,11} coping with chronic disease, and quality of life.^{8,12-14}

While the majority of past research on mindfulness and health has focused on adults, in recent years a greater emphasis has been placed on examining the role of mindfulness instruction among youth. Studies conducted among school-aged children in academic settings have described a range of potential benefits of mindfulness programs, including improvements in mental health outcomes and school achievement (for reviews, see Meiklejohn et al¹⁵ and Zenner¹⁶). This body of work includes a small number of randomized controlled trials of

¹ The Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

² The Johns Hopkins University, Baltimore, MD, USA

³ The Johns Hopkins School of Medicine, Baltimore, MD, USA

Corresponding Author:

Deanna Kerrigan, PhD, MPH, Department of Health, Behavior, & Society, The Johns Hopkins Bloomberg School of Public Health, 624 North Broadway Street, HH257, Baltimore, MD 21205, USA.

Email: dkerrig1@jhu.edu



school-based mindfulness programs that have shown significant benefit in psychological functioning and coping skills.¹⁷⁻¹⁹

Mindfulness research among young adults in the university setting has focused primarily on nursing and medical students,²⁰⁻²⁴ with limited exploration of the role of mindfulness among the general student population. Similar to findings among youth overall, the available research on mindfulness programs at universities indicates a positive impact on psychological health outcomes,^{13,20-23,25-30} and improved academic performance.²⁴

While mindfulness may be associated with greater academic performance, the purpose of mindfulness is not to promote striving for greater social status or “success.”²⁴ However, such achievement orientations are particularly prevalent among students at highly-ranked universities in the United States and internationally, where the criteria for admission is extremely competitive. For many of the higher-ranking universities, students must have excellent grades and extraordinarily high standardized test scores for admissions, in addition to a wide range of extracurricular activities and other talents.³¹⁻³³

Perfectionism has been studied by a number of scholars in the field of clinical psychology. Its maladaptive forms have been found to negatively affect a variety of mental health outcomes such as depression and anxiety and physical conditions such as anorexia nervosa. Importantly, Flett and Hewitt, who have written extensively on this topic,³⁴⁻³⁷ extended the theoretical understanding of perfectionism to include both *self-oriented* perfectionism, or the internal pressure one places on oneself to achieve certain status or outcomes, and *socially prescribed* perfectionism, or the external pressures emanating from others, reflecting the growing cultural orientation of perfectionism at a societal level. However, the role of socially-prescribed perfectionism and its relationship to health and well-being has been less studied to date.

Socially-prescribed perfectionism among young adults in highly-ranked, including elite and Ivy League, universities in the United States has garnered increased attention in recent years, with reports of increased rates of campus suicides linked to the pressure to “perform” academically, socially and in extracurricular activities.³⁸ College wellness centers have reported significant increases in severe psychological problems among students seeking mental health services,^{39,40} with anxiety and depression now the most common mental health diagnoses among college students.⁴¹⁻⁴³

While there has been increased interest in the role of mindfulness in academic settings, there has been limited work on the role of mindfulness programming among university students, particularly those with strong academic achievement orientations. Mindfulness interventions may be particularly relevant for this group, as they may experience individual, institutional, and social pressures related to perfectionism which may facilitate ongoing stress and related risk behaviors. We aimed to qualitatively examine the context, dynamics, and potential benefits of participation in an MBSR program implemented in a highly-ranked university in the northeastern United States.

Methods

Between August and May 2014, approximately 35 university students participated in a pilot MBSR program offered in the fall and spring semesters of the academic year. The program was introduced to students (undergraduate and graduate students of arts and sciences and engineering) using e-mail and electronic newsletter announcements, posters, flyers, promotional cards, and in-person table events and information sessions during fall orientation. The course was offered in a large campus meeting room early on Sunday evening, based on student input.

The MBSR program offered was developed by Kabat-Zinn and was designed to introduce participants to mindfulness practice as a vehicle for self-awareness, healing, and increased mental and physical well-being.⁴⁴ It consists of 8 weekly group sessions and a 1-day retreat taught by a trained MBSR instructor. Per MBSR guidelines, each course session offered participatory didactic material on mindfulness concepts and techniques such as sitting meditation, yoga postures, and the “body scan”; experiential learning and practice of these different techniques; and group discussion of participants’ experiences with the different methods and barriers to integrating mindfulness into daily living.

A total of 23 in-depth interviews were conducted with MBSR participants over five months. We approached students participating in the fall course, 13 of whom agreed to participate in interviews related to their experiences in the program. Ten students participated in interviews before and after the program. Three students who started but did not fully complete the program were also interviewed to gain insight into issues of attrition and dropout.

The majority of interview participants were female, undergraduate students, (n = 11) and two were male, one of whom was a doctoral student in his second year. The average age of participants was 20 years (range 18-29 years). Of the 12 undergraduate students, 4 were freshmen, 3 were sophomores, and 5 were seniors. Eight participants identified as Caucasian, 2 as Latino, 1 as Asian, and 2 reported being multiracial/multiethnic. Participants’ academic majors spanned 9 disciplines; 3 had double majors and 3 were pre-med.

All interviews were conducted by 1 of 3 female doctoral students trained in qualitative research methods and ethics. Interviews generally took place on campus in a private room or office. A semistructured guide informed the interactions between interviewers and student participants. Key domains explored included the following: personal goals, priorities, and background; current and past stressors and coping strategies; motivations to participate in the program; experiences with the program; barriers to attendance and practice of program techniques; and impact and future use of the MBSR tools and methods. All interviews were audiorecorded (digital) with the participants’ permission and transcribed in their entirety into textual files for analysis.

Both thematic content and narrative analyses were utilized to analyze the data.⁴⁵ First, case summaries of each interview were developed using a template created after transcribing and carefully reading interview transcripts. The cases summarized key points and facilitated selection of illustrative quotes in each of the a priori domains described above and identification of emergent domains from the texts. The summaries served to narrate the participants’ views and experiences over time including prior to, throughout and immediately after participation in the MBSR program. Drawing from these summaries, memos were developed synthesizing findings across participant interviews for each key domain. Memos guided the development and organization of the thematic areas presented in the results.

Results

Narratives described a fast-paced, competitive academic environment in which participants felt the need to constantly perform to the best of their ability, often leaving them feeling stressed and overwhelmed. Mindfulness programming offered an opportunity to step back and reassess the need for and utility of this constant striving to be perfect. Specific mindfulness techniques provided temporary relief from ongoing stressors, while the mindfulness orientation overall stood in stark contrast to the achievement orientation of the academic environment.

The Academic Environment

All participants reported that in addition to a very heavy load of intense academic courses, they were involved in a variety of extracurricular activities. All stated volunteering in the community in some way (eg, mentoring children, fundraising for a local nonprofit), and most held one or more part-time jobs. Most also maintained a variety of hobbies and social commitments, including sports, film, music, theater, Greek life, or other regular recreational groups. In turn, the daily life of participants was characterized as a “constant shift” between distinct roles they play as students, volunteers, leaders, workers, and friends. A senior international studies student used the analogy of a “ juggler on stage” to describe what this daily experience was like for most students in this fast-paced academic environment: “Not only are students juggling a lot, but also they’re juggling on-stage and being evaluated on how well they’re doing it and whether they’re dropping any balls,” he said. Another student, who was president of a large charitable organization and who struggled with a stress-related chronic disease, said she felt “constant pressure” to perform and relayed that “Performance is the biggest thing across the board, whether it’s my job, you know whether it’s academics, um whether it’s extracurriculars, it’s just always the best performance.”

Students interviewed explained how the pressure to achieve is heightened in an environment of intense competition where there is a tendency for social comparison. Many described graduating at the top of their academic class in high school and now feeling like a “small fish” at a highly-ranked university. One student, who was interviewed at the start of her freshman year, said she was worried that she was already “behind” because peers with more privileged background had “more opportunities” in their high schools. This sentiment was corroborated by another student as given below:

It’s quite a competitive environment here, so the competition puts a lot of stress on people. Because, suppose you’re in a bio class and you’re not pre-med, um, the thought process is “I’m competing against the people who are pre-med, who know that they need to know this material for the future, so they will study ten times harder than me.” So when you’re at [the University] you’re put in a pool of people who are on level with you, if not better. So I think dealing with a lot of feelings of inadequacy or that, you know, their skills aren’t good enough to be here or they’re feeling

like they’re not doing enough. I know some of my stress comes from I feel like I’m not doing enough. (Female, 19 years old)

Students described the university as an incredibly competitive and achievement-oriented academic environment in which not having a full plate would be looked down upon. A pre-med sophomore described the specific character of this private university compared with nearby public universities where she has visited friends.

It’s really hard for me to articulate the like milieu of the, of an area, um, I guess just like, going to [other universities], you walk around and people just look happier. Um, like there are more people who are dating. You walk around here and like you might see like one couple holding hands. Um, whereas in like other places, everyone’s dating someone, everyone’s in love or whatever. People are sitting down more at other schools. Here, they’re always like speed walking. (Female, 19 years old)

Based on the majority of participants’ descriptions, if students were not “speed walking” between classes, work, and extracurricular activities, they were “always at the library.”

Background Stressors

Stress was generally defined by students as a mental or physical reaction to feeling overwhelmed with life. Physical symptoms described by students included heavy breathing, shortness of breath, poor sleep and fatigue, not feeling well, stomach pain, muscle tightness, migraines, hair loss, teeth grinding, and fast beating of the heart. However, others highlighted the mental aspect of stress, suggesting that it was identified when an individual notices a lack of focus or one’s “mind bouncing around,” with concrete indications such as constantly looking at the clock, eating junk food, looking to social media and television for distraction, or when one mentally “shuts down” and loses productivity altogether. Overall, many students discussed stress as a sense of heightened worry surrounding an upcoming task or what their future holds.

Participants tended to focus on sources of stress related to the act of balancing academic and extracurricular activities, and those relating to family dynamics. The vast majority emphasized that academic life was their primary source of stress. As a result, several students mentioned experiencing negative feelings toward schoolwork on a daily basis and constantly “feeling on edge.” Other students described trying to maintain a positive mindset even in the face of disappointing grades or academic “failures,” noting they often repeated to themselves in such instances that they tried their best and they would just try harder and study longer next time.

Most students relayed feeling the need to excel not only in their coursework, but also in various extracurricular activities. Interviews suggest that there was an unspoken expectation within the university for this type of multifaceted, high achievement. One pre-med senior described the struggle to

create balance in light of the expectation to perform well in all facets of life at all times:

Yeah, well like, partially like, I umm, I put, like I have a lot of activities going on and so I guess like part of being in college for me was trying to learn how to balance out my schedule and figure out what things I need to cut, what things were priority and then what things were extra that I should cut out so I can make time for myself 'cause usually I try to fill my plate up with a ton of different things and I have a lot going on from clubs, organizations, and things like that. Um and so just kind of a like struggle in trying to have enough time to do everything but do everything well. (Female, 21 years old)

Family dynamics were also a significant stressor for some students, often involving a difference in perspective on the student's professional trajectory or financial struggles. A few students also described family pressure to achieve high grades, but because students were generally self-motivated and had a history of achieving high grades, this was an expectation that almost needed no explicit emphasis. Instead, most family stress (usually parental) revolved around what students should pursue as a career path or further education following their graduation. Several students also discussed significant "social stress" related to what to do after they graduated, indicating their desire to do something "meaningful" and be a "productive" and useful "citizen." One senior found himself reflecting on the process of making the transition from school to employment. He described how the paths he and his friends were taking had begun to diverge and how this had led to him to grapple with his identity and future.

One thing I still need to work on definitely is social stress and... I'm already feeling pressure about keeping up with the Jones's. You know I've taken a certain outlook and course in my life and now seeing the kids who are hell-bent on Wall Street and finance and consulting and even the kids who are going on to become doctors, that's great and all these kids are gonna be successful in the white picket fence sort of conception. But I don't know how happy they are. I consciously tried not to pursue that. (Male, 21 years old)

Participants were asked if there were any specific subgroups of students that may experience more stress than the average students at this high-ranking university. Most replied that any science major or pre-med student was subject to additional stress. Several students suggested engineering students, due to a requirement that they take more credits per term than the average student. Other subgroups that students stated may experience more stress were those in sororities and fraternities, athletes, students with disabilities, international students, and "anyone who sticks out in a crowd." This range suggests that students with extraordinarily demanding schedules or students who may be considered to be outsiders to the general group norm may experience additional stress.

Motivations for MBSR Participation

The most common narrative of the students joining MBSR was that they were all highly active, busy people whose days were beyond filled with school-related assignments, numerous extracurricular activities, work to support themselves while in school, and other personal obligations and pressures (family, relationships, etc). The phrase "constant" work, activity and/or pressure came up in most interviews. The level of sheer activity seemed to carry a significant mental and physical stress burden for many. The concept of social comparison to peers at the university was commonly mentioned as an added aspect of stress and anxiety.

Approximately half of participants experienced some form of illness or chronic health condition, which they attributed to ongoing stress and pressure. Several participants stated that this was a key element of their motivation to participate. Many mentioned not having sufficient sleep or reported they were not eating well, adding to a generalized sense of lack of health and well-being. Half of those interviewed discussed having some prior experience or exposure to mindfulness-related concepts and techniques including sitting meditation and yoga, which stimulated their interest and desire to learn and do more in this area.

While almost all participants described the heavy burden and stress from their intense daily life as the primary motivation to participate, about half described a desire to reduce stress specifically to improve their academic "focus" and "thought control" (eg, less distracted, particularly in homework and tests) and improve their grades and achievement. One student observed this dynamic by reporting that "A cyclical pattern arises whereby academic achievement is used to justify poor health behaviors, while in turn better health behaviors are sought to promote achievement." On the other hand, several people reported wanting to participate to have a "more balanced life" and "peace of mind."

In the first scenario, participants reported a desire to use MBSR to focus academically:

Well, when I stopped by there, I really didn't know what it was, so I just looked to see, and when I saw that it was a stress-reduction program I thought that maybe I should be a part of this because in high school I had like a lot of AP classes, the teachers would give us a lot of work, and I would be stressed out at, uh, sometimes during the night and I'd just be worrying and worrying a lot and just constantly working, so I'm just hoping this program will help me like calm myself down when I'm in like that moment. (Female, 18 years old)

In the second scenario, participants reported looking for more overall balance in life:

I'm just a very high-octane type of person. I don't get a lot of sleep, which is probably not very healthy, and I like to do as much as I can. I'm kind of of the mind, like, you only live once, take advantage. But I feel and I know that sometimes that hurts more than helps me. Uh, so I thought that this was a nice way to kind of force

myself to take a step back, even if it's just for two hours a week, and experience something that's very different from what I'm used to. (Female, 18 years old)

Cultivating Mindfulness

Participants described key aspects of cultivating mindfulness, including “paying attention to thoughts and feelings,” “being in the present moment,” and applying “nonjudgment and acceptance.” Additionally, participants placed considerable emphasis on the idea of not only accepting but also “reframing” a given situation, once they were able to attend to the cycle of rumination, negative thinking, or stress around a specific challenge. In some cases, participants discussed these processes sequentially, while in others, as is depicted in the quotes below, these processes were strongly interconnected. For the purpose of clarity, we have grouped these processes into three domains, with the understanding that they often work fluidly together.

“Being in the Present Moment.” All students who completed the program described having more moment-to-moment awareness of their thoughts, emotions, bodily sensations, and/or behaviors, something most attributed to building a habit of “checking in” with themselves throughout the day. When doing activities such as breathing breaks, sitting meditation, or mindful eating and walking, students described an experience of shifting out of “autopilot” and reconnecting with thoughts, feelings and sensations, a process that they said made them feel calm and energized.

I think it's definitely made me more aware of what I'm doing, just like how I'm feeling emotionally. I'm like, am I avoiding something? Why am I doing each specific action? I think about it now. Not all the time because that would be a giant time-consuming thing, but I just check in with myself and just like, well, do I want to be doing this? Am I okay doing this? Should I be doing something else? (Female, 19 years old)

Several students also reported that by being able to stay in the present moment, they were not only more calm and less stressed, but also were better able to enjoy activities that they were involved in, whether that was being with friends, or watching movies.

“We Aren't Perfect”: *Practicing Nonjudgment.* In addition to learning to be in the moment, students described the process of learning to “let go,” to be less “controlling” and to have more reasonable expectations of themselves. Some discussed how they now recognize emotions without judgment and let them “be on their way.” They were able to begin to move from awareness to acceptance and non-judgment regarding themselves, others or a given situation.

They said a lot about just taking how you feel and accepting it and I really liked that. Because I know a lot of people kick themselves for being sad or for doing this again, but I mean, you should learn

from your mistakes but you should also just listen to whatever your body is telling you to do. (Female, 19 years old)

For many participants, the process of acceptance included coming to terms with the idea that “we aren't perfect” and that constantly striving to be perfect isn't necessarily the most enjoyable or healthy approach to life. Closely related to this was an acceptance of what they could reasonably accomplish in a given day, including realizing there are limits to productivity and that what's done is done and what isn't done is okay.

I don't make lists anymore, which is really good because I don't want to say I've lowered expectations for myself, but I'm not unreasonable anymore, and I don't get disappointed if I don't do certain things . . . [the program] has helped me be more relaxed. It's helped me be nicer to myself. It's helped me look at the bigger picture more often instead of having each problem of mine be a microcosm. It's more like does this really matter as much as I think it matters? It's like probably not. I think it's helped me develop better habits, yeah. (Female, 19 years old)

Other participants mentioned being able to bring mindfulness to their tendencies to compare themselves to others and feel that they must always achieve more and be the best. Overall, nonjudgment was discussed as one of the more meaningful aspects of the MBSR program by several students, emphasizing the importance of how an environment of non-judgment was established during each MBSR class by the instructor. This was seen as particularly important given how much it stood in contrast to the surrounding academic culture of the university and among peers. Participants also discussed trying to be more accepting and nonjudgmental of others, as they learned to be more kind to themselves. This involved being a better listener and more supportive as opposed to seeing everyone as the “competition.”

From “Checking in” to “Stepping Back”. As students learned how to stay in the present moment without judgment, they also relayed how they moved from not only “checking in” with themselves, but also “stepping back” from a situation and reframing it. Several students reported being better able to look at “the big picture.” They said that gaining a greater perspective on a situation allowed them to see things differently and gave them a sense of agency to change a negative orientation, or to become less concerned with a problem that would have otherwise bothered them.

Most students described themselves as engaging in *reframing* in their lives more often as a result of their participation in the MBSR class. This included reframing life situations into something more positive, reframing schoolwork as something more achievable, and reframing negative moods and feelings as something changeable. The process of reframing also included seeing academics as important but only part of a broader life context and journey, with the understanding that there are other things in life besides schoolwork that are meaningful.

I think it's a way to take a step back from your life, take a breath, you know relax, realize that not everything in life is about academic work. Um, you can be happy by just sitting outside and watching things, you know like enjoying nature, enjoying what you do, eating right, and being happy with who you are. So, um, this program does a good job of making people realize that "hey, there's more to life than maybe just my book." (Female, 19 years old)

Benefiting From Mindfulness

Reduced Stress and Anxiety and Improved Coping. Students who attended the MBSR classes generally found the sessions to be helpful and described many positive elements of their experiences. Most said the state of present-moment awareness gave them a greater sense of not only calm, but also energy and agency to manage and find balance in their day-to-day lives. Students said they were better able to more quickly identify when they were feeling stress and in turn avoid getting to more extreme or overwhelming cycles of anxiety. As one participant relayed,

Just the main idea that, when you're in that moment where your mind is just wandering, you do need to take that step backward and try not to focus either on the past or what's coming later on, but to focus in on what's happening now. So that's what really helps reduce the stress.

Another added,

Yeah, it really does help you deal with stress because when you just take things moment by moment, you realize that it's not that bad.

The idea of being able to identify stress more quickly and break cycles of anxiety was described by study participants as a key concept and helpful tool from the program:

I think in class practicing being aware of the sensations in your body has helped me identify the physical stress responses better because like I can feel when my breath shortens or when I feel tightness in my chest. I think I am more aware of the physical stress responses which help me kind of identify that I'm stressing out and to do what I can to try to manage that rather than getting caught up in the feeling. (Male, 29 years old)

Additionally, several participants discussed the idea of not only being able to better identify stress, but also how they related to it when it arose. When asked if there was anything from the program that they had been able to apply to handle stress differently, one interview participant described techniques for "refocusing how I look at things" and "being very aware of yourself and your body and how you are feeling" and "reshifting my perspective."

I think I've had more of a positive outlook on stress. And really trying to take away the negativity, which I think can, in addition to

being overwhelming, just make it feel, put yourself in the mindset that it's something you're not going to be able to overcome. You know, just being more aware in general is helpful because you can just learn how to handle things better when you have that awareness, while other times you just, if you push things away and you don't deal with them and you don't sort of acknowledge them, it becomes a mess. (Female, 20 years old)

For some students, reduction in stress came from coming to see stress as something they created in their emotional response, and therefore under MBSR they are not "amping themselves up" or fueling their own level of stress as often:

I wouldn't really say that I was in situations that were particularly—I mean I don't know how to say this. My life is not terrible, so most of the anxiety came from me, and I would say that I've been doing that a lot less. (Female, 19 years old)

Reduced emotional or physical experience of stress also reportedly resulted in several key physical outcomes for participants including better chronic disease and pain management, for whom that was relevant, better sleep, less hair loss, and fewer headaches, including migraines.

While most found MBSR helpful, there were a few students who found the program a bit "slow" and mentioned they had imagined it would involve more physical activity such as yoga and other exercises, which they were looking for as an outlet.

Increased Productivity and a Healthier Relationship to Academics. In addition to reduced stress and improved mood, many students reported that the cultivation of mindfulness also helped them with their academic focus and productivity. Specifically, the "calm," "groundedness," and "focused attention" they experienced led to a greater sense of energy and self-efficacy to be able to handle stress and complete tasks. Students relayed that by paying attention to their inner narratives—accepting thoughts as they arise and letting them go—they fostered a quality of mind where they were able to focus more effectively on the task at hand.

I think I don't lie awake as much. And I think being better rested helps me be more productive throughout the day. I don't find myself at the end of an afternoon thinking, "oh wow, I really wasted a lot of time." I guess when I'm tired I get more easily distracted and I'm just less productive. So I guess I feel like I use my time better. I'm able to focus better. Let's see. We're talking about how dampening the stress response has helped. So I think if I'm in a situation that's not ideal with an assignment, I think I'm better able just to assess the situation and do what I can rather than . . . So if I have less time than I had hoped to be able to spend on an assignment, I'll just not freak out so much. Just be able to focus and get done what I can rather than wasting a lot of time worrying about how things could have been different or what the consequences will be of my perceived failure or whatever. (Male, 29 years old)

Some had worried that mindfulness activities would be too time-consuming, but on the contrary several participants reported a greater ability to focus than they would have had if they had been caught up in cycles of self-critique or the anticipation of negative outcomes. Additionally, students reported less avoidance of their tasks. This was in part due to spending less time in avoidance “escape” activities such as TV or social media platforms or websites, and instead, more calculated taking of mindful breaks as an intentional space-taking, not a procrastination technique. Instead, they reported “de-stressing” in more effective ways they learned through the program, giving them a sense of greater energy than the avoidant coping strategies did:

The way I always de-stressed was watching a movie or listening to music or something, but this was different. Uh, the meditation kind of, it gets you focused more on something, but also you kind of get more energy out of it, and that’s what I liked about it. After those two hours I always felt rejuvenated and like energized a little bit because of the meditation, and I really like that aspect of it . . . In general when I’m studying and I feel overwhelmed—like oh I have to go over all this stuff—I just take a minute and take a deep breath. There’s this thing called a breathing meditation, and I do that, and that just sort of helps. (Female, 18 years old)

Several students were so adamant that they were more productive or efficient as a result of their participation in the MBSR program that they even went so far as to advocate that the program should market itself as increasing your productivity. For many, this related to the ability to concentrate more effectively and thus achieve a higher yield on their work—something they related to focusing on the present and letting go of worrisome thoughts about the past or the future. Others felt more productive because being mindful gave them the ability to sit down and focus for longer periods of time.

At least three students mentioned a more positive relationship to the idea of working, to the quantity of work, or to the intense sessions that might be involved in different assignments. Below, a student reports actually enjoying an all-nighter for the first time, instead of being overcome with stress about it:

I hadn’t really thought about it. I mean something must’ve had to change. Like I pulled an all-nighter for the paper on Thursday late then Friday. I was totally fine with it. I’m like, “This is fun. Let’s do it again!” <laughs> It was weird. I don’t know. I just think I had a lot more confidence in my ability to finish things.” (Female, 19 years old)

Some students, particularly those who did not attend most of the classes or discontinued early, noted the class could be improved by adding course credit or graded component to the program, highlighting the achievement-oriented nature of the students. Some felt as though life is a “zero-sum game” where there is only so much time, and that while interesting, MBSR simply wasn’t their priority given competing demands. Others

noted that there was not enough instant gratification from their participation in MBSR and it had become clear to them that truly reaping the benefits of mindfulness would potentially require much more time and dedication than they currently had available. In essence, many felt that the sessions were helpful, but in the end the “work still needs to get done” and for others, going to the MBSR class felt like an additional stressor by adding another activity to an already packed schedule.

The sentiments above were conveyed by a minority of participants interviewed. For most, the overall orientation and practical tools offered by MBSR were perceived as important resources in the face of the “constant” demanding schedules of their daily lives.

Experiencing a Non-“University” State of Mind. Using the techniques learned through the MBSR class to dampen the stress response was viewed as an important alternative to the norm among most university students who tended to let the stress response “carry them away.” For some students, an inclination to “stress out” with them to college. For others, it was a learned behavior fostered at the University. This respondent described MBSR as giving her an added protection against the university’s “stressing-out” disease:

I think that you can really become someone who only cares about grades and who spends all their time in the library. And I don’t think there’s any fun in that. But I’ve found so many people and so many of my friends don’t do that. So I have a couple of friends that do. But most people are in agreement with me that that shouldn’t be how you spend your college career, just in the library. But you need to do a little bit of it. (Female, 19 years old)

Several participants indicated directly or indirectly how being more mindful could help start to shift the larger culture of overachievement at all costs that was predominant on campus at the university. One student specifically reported that the MBSR program could contribute to a culture of improved mental health and well-being on campus.

I think we all know on an intellectual level that everyone needs rest, but I think when it comes to practice and self-application, I think that’s where there’s a huge disparity . . . I think that programs, you know, like this one, is a great way to change the environment on campus. I think it’s something students want, it’s just there’s no outlet for it . . . I mean, I think there’s, again like, the fact that I feel guilty for going to a two-hour program that focuses on me. And the reason why that is is because of the overwhelming work and [the] culture . . . It doesn’t allow for that. I . . . and I think that, there needs to be the opportunity for that. So, for example, if a student wants to participate in a two-hour program, and the focus is on themselves and dealing with stress, I don’t think that should be, should come at the point where it then becomes a decision between that and doing work. (Female, 20 years old)

Some students said the pilot program was an initial jumpstart or gateway to future mindfulness practice in off-campus settings such as community meditation centers. Most discussed

wanting to continue practice and several suggested offering it to all freshman.

Well, I think it really helped put things in perspective. Because I would be focusing on just being present the whole time and leading a healthy lifestyle. And realizing that stress about homework and stuff just really isn't worth it. And so I think it was helpful. I wasn't really a stressed out person before. But I can definitely see how the University can make you a stressed out person. And so I think it was good to be introduced to this [University] and have this program at the same time. (Female, 19 years old)

Discussion

One of the first qualitative explorations of the role of mindfulness training in a highly-ranked university setting, this study allowed for an in-depth understanding of the constant stress and pressure to perform and be perfect faced by college students in a high-achievement oriented academic environment. Findings suggest that the nature of stress faced by most participants was high and relentless, and often took a substantial physical and psychological toll on them.

The mindfulness training presented in the MBSR course offered students an opportunity to step back from the intense pace and pressure of an often overwhelming mix of academic schoolwork, extracurricular activities, and other commitments. MBSR offered them both practical tools to confront and manage these challenges. It also offered them a space to reflect on the larger achievement orientation that surrounded them and how they related to it, and its consequences for their health and happiness.

Participants reported learning not only to recognize the achievement orientation "autopilot," but also to be more accepting of their limitations and grapple with their feelings and need to always be perfect, an unattainable goal that had largely been internalized. They learned techniques to recognize and reframe negative thinking that produced anxiety and depression and dampened academic productivity and enjoyment.

MBSR was seen not only as a program that could help individuals address their stress and allow them to make more healthy choices, but also a means to gain awareness of and potentially challenge and shift their relationship with the surrounding academic culture of achievement, social comparison, and perfectionism. Expansion of the program throughout the university was seen as potentially beneficial to the larger student body and campus culture, as a means of encouraging the principles of curiosity and learning in the face of pressures to obtain excellent grades and high-status jobs.

While interviews suggest not all students may immediately appreciate all the aspects of mindfulness training, most agreed that some form of stress reduction intervention was urgently needed and would help address mental health problems in this population. To date, the majority of work conducted to address the potentially negative mental health consequences of perfectionism has been conducted in clinical settings.⁴⁶ However, our

findings suggest that university campuses may be an important and feasible context in which to expand such intervention research.

In describing the nature of mindfulness practice, Jon Kabat-Zinn has stated, "there is no performance, there is just this moment." Cultivating mindfulness allows the time and space to simply be, letting go of the constant striving to do more and to be perfect. "Doing" in the practical sense of the word is a necessary and important element of both academic and non-academic aspects of any individual's life. However, as many of the participants relayed, "doing" that is set within a broader foundation and orientation of mindfulness offers the possibility for greater balance, wellness, and creativity. While mindfulness training alone will not eliminate the stress of being in a highly competitive, faced-paced academic environment, our findings suggest it may make an important difference in shifting individual perspectives and experiences and possibly the larger university culture that contributes to stress and limits health and well-being.

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Author Contributions

DK and ES designed and led the study, with the assistance of AJ, who also assisted in recruitment planning. VC, MK, and EH conducted interviews and assisted with analysis. DK led the writing and all authors reviewed and provided input.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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ORCID iD

Melissa King, PhD, M.P.Aff  <http://orcid.org/0000-0002-4818-0659>

Ethical Approval

Study procedures were approved by the Johns Hopkins University's School of Medicine Institutional Review Board. Each participant provided written informed consent and received a \$25 gift card per interview. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants in the study.

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