Mindfulness-Based Interventions for Anxiety and Stress in College Students: An Integrative Review

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Introduction

The Mental Health of the University Student

Mental disorders have been increasing within the university. The prevalence of most emotional problems has increased in recent decades among college students. What before the 1990s was referred by them as the biggest problem (relationship problems) today has lost space to emotional and mental issues (Storrie et al., 2010), now they are being mainly affected by anxiety, stress, and depression (Beiter et al., 2015), in addition to other disorders such as eating disorders, psychosis, and obsessive-compulsive disorder (Storrie et al., 2010).

With important changes occurring in their lives and new demands of university life emerging, skills and competencies are required of the university student to handle these demands, which can be important stressors for the student (Ariño & Bardagi, 2018). Anxiety in academic situations may cause important consequences for student learning and well-being (Hjeltnes et al., 2015). Performance anxiety, for example, is described in DSM-5 as a subtype of social anxiety, and affects the individual's academic and professional life (APA, 2014). According to Beiter et al. (2015), the main concerns affecting college student's mental health are academic performance, pressure to succeed, and plans for after graduation. In addition, academic experiences and the perception of self-efficacy are also important aspects in the correlation with students'mental health (Ariño & Bardagi, 2018).

Even though they are experiencing emotional and mental difficulties most students do not seek help and one of the main reasons for this is the stigma associated

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with mental disorder. Thus, students have fear of being branded as weak, which could affect their careers in the future (Storrie et al., 2010). Ariño and Bardagi (2018) point out to the need to promote institutional actions aimed at empowering students to better manage their academic life, so that they are effective in their time management in a balanced way, not neglecting hours of sleep and leisure, in addition to being able to perform good study strategies. In addition, there is a great need to promote interventions that benefit the mental health of university students in order to prevent mental disorders such as anxiety disorders and excessive stress. Mindfulness may be a beneficial proposal in this sense.

Mindfulness

The term "mindfulness"is commonly understood as "full awareness" in medicine and psychology. Today, mindfulness practices used in health facilities are secular, although the concept of mindfulness was born in Buddhism and other contemplative traditions (Brown & Ryan, 2003; Demarzo & García-Campayo, 2015). Mindfulness is often described as a mental state characterized by intentionally bringing one's attention to the present moment, observing what is there curiously, non-judgmentally, and with acceptance, without trying to change anything (Kabat-Zinn, 2004), and is taught through a variety of meditative practices (Baer, 2003). Meditation practice is used with the aim of developing skills to evoke the state of mindfulness, which is also not exclusive or limited to meditation. Once the skills to achieve it are learned, attention can be regulated to achieve this state in many situations (Bishop et al., 2004; Brown & Ryan, 2003; Demarzo & García-Campayo, 2015).

Bishop et al. (2004) propose that mindfulness is defined, in part, as a form of self-regulation of attention that involves sustained and alternating attention and inhibitory control, thus being considered a metacognitive skill. Mindfulness can also be considered as a process of relating to experience in a different way: openly. By adopting a relationship of openness and acceptance with experience, including unpleasant feelings and sensations, it can lead to a change in the psychological context in which they are experienced, leading to a possible greater tolerance to them, decreasing the need to react to them quickly. Shapiro et al. (2006) suggest that mindfulness involves three components: intention, attention, and attitude. These are blended aspects of a dynamic, cyclical, and unique process that happens simultaneously, from moment to moment. Whereas Baer et al. (2006) propose mindfulness as a 5-factor framework: observing, describing, acting with awareness, non-judging, and non-reacting.

Mindfulness-based interventions (MBIs) have in their structure some elements and influences elements. They are contemplative mindfulness practices, science, medicine, psychology, and education. In general, MBIs aim to enable participants to recognize conditioned and habitual modes of response and behavior and to make changes in their relationship with their thoughts, feelings, and body sensations, as well as with external circumstances. The change in this relationship is based on

what is called *decentering*, in which the participant is trained to relate to thoughts or feelings as mental events, noticing how they come and go from the mind, and how each one has consequences in the next moments (Crane et al., 2016).

MBIs, in the format in which they are known today, applied to health, emerged in the United States of America, with the Mindfulness-Based Stress Reduction Program (MBSR), developed by Jon Kabat-Zinn in the 1970s, in Massachusetts, for chronically ill patients (Kabat-Zinn, 2004). From MBSR, several protocols for a variety of pathologies were born. MBIs have increasingly gained ground in healthcare as a complementary treatment for various disorders, such as depression and prevention of depressive relapse (Kuyken et al., 2016; Tickell et al., 2019; Van Aalderen et al., 2012), stress reduction (Kabat-Zinn, 2004), chronic pain, substance abuse (Goldberg et al., 2018), anxiety disorders (Ghahari et al., 2020; Hoge et al., 2013), and also for increasing quality of life (Godfrin & van Heeringen, 2010).

Some of the mechanisms of action of Mindfulness are already known, and the main ones are related to *decentering*, which occurs with the change of relationship with the experience, from getting in touch with it from a new point of view. It also reduces worry and rumination (Desrosiers et al., 2013).

Given the need to think about interventions that benefit the mental health of university students, and the benefits that MBIs have shown in the clinical field of mental health, we propose an integrative review on the effects of MBIs on the mental health of this population, especially regarding the stress and anxiety of these students.

The Present Study

This study is an integrative literature review that aimed to identify, analyze, and synthesize the studies on MBIs for anxiety and stress in college students. The integrative review allows the inclusion of several methods to synthesize knowledge and assess the clinical applicability of an intervention, in addition to pointing out gaps in the literature (Souza et al., 2010). It took place through the 6 phases of the development process described by (Mendes et al., 2008): 1a – identification of the topic, establishment of the hypothesis or research question; 2a – establishment of the inclusion and exclusion criteria of the studies, as well as of the sample, and literature search; 3a – definition of the data to be extracted and categorization of the studies; 4a – assessment of the studies included in the integrative review; 5a – interpretation of results; 6a – presentation of the review and synthesis of knowledge. The guiding question was: What are the effects of Mindfulness-based interventions on college students suffering from stress and/or anxiety?

In the period between March and April 2021, a bibliographic search was made through three main bases: PubMed/Medline, SciELO and LILACS, without restriction as to the year of publication of the articles. The descriptors used for the search were: MINDFULNESS, ANXIETY, STRESS, UNIVERSITY (or synonyms), and

STUDENTS, with the Boolean operators AND or OR between them. In the LILACS search, the filter that excludes articles in common with MEDLINE was used.

For article eligibility, the inclusion criteria were: studies assessing mindfulness-based interventions for anxiety and/or stress in college students. Exclusion criteria were: case studies; studies in which stress or anxiety were not the primary outcomes; studies in which mindfulness interventions were not "multimodal"; reviews that were not specific to mindfulness interventions; studies on specific groups; studies in which populations were mixed, not being only college students; studies in which there was no mindfulness-based intervention; and studies in which the mindfulness intervention was not interactive.

After crossing the keywords, a total of 539 articles were obtained, 192 from PUBMED, 334 from LILACS, and 13 from SciELO. Duplicate articles were excluded, and the remaining articles were screened by reading the titles and abstracts. Then, the pre-selected studies underwent a second screening, through an evaluation of their methodology according to the inclusion and exclusion criteria, resulting in a final sample of 26 studies, as shown in the flowchart in Fig. 1.

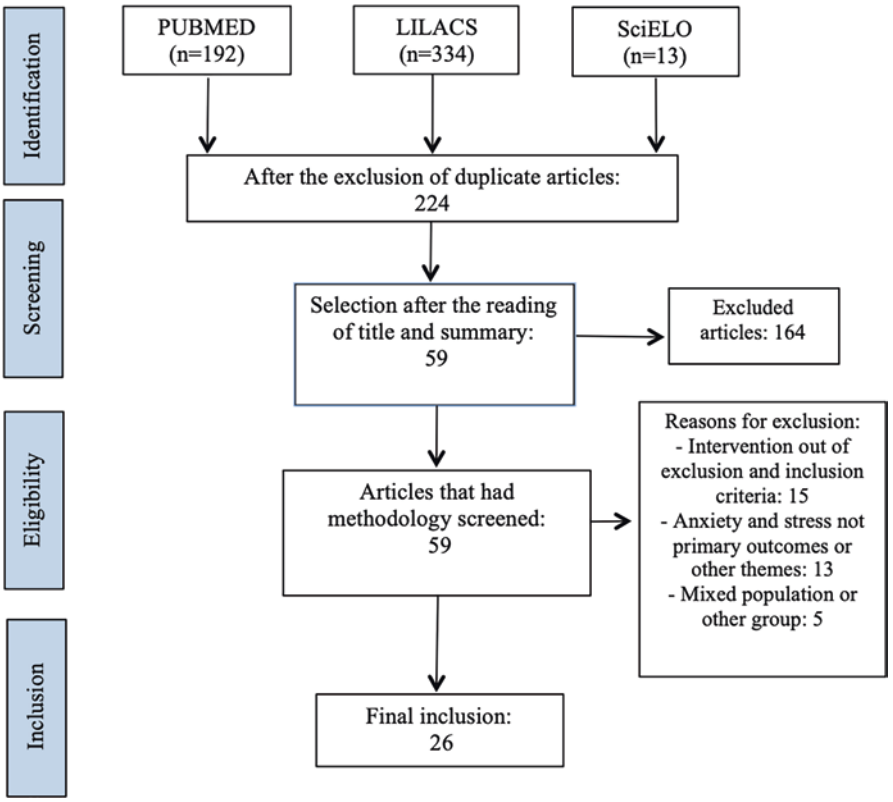

Fig. 1 Flowchart of the selection of articles

To synthesize the data obtained in the studies, the proposal of Ursi (2005) was followed in the extraction of data.

What Are the Results of the Studies?

The studies selected for this integrative review were published between the years of 2008 and 2021. Most of them (55%) are randomized controlled trials, 15% are controlled and non-randomized clinical trials, 4% are meta-analysis, and 7% are systematic reviews. The percentage of study types is shown in Fig. 2. Regarding the experimental studies, 25% had only active control groups, 29% of them with active and passive control groups, 25% only with passive control groups, and 21% had no control group.

To facilitate the visualization of the results, Table 1 was built with a summary of the methodology, variables, and main results of each study.

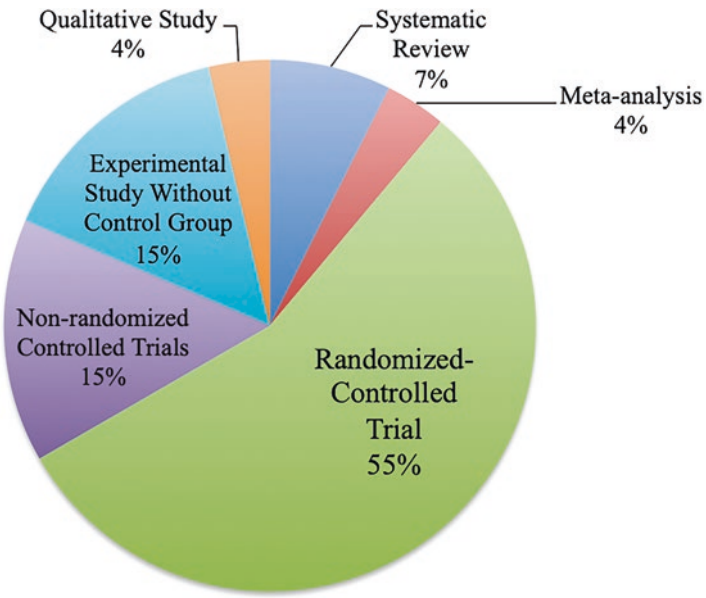

Fig. 2 Types of study

Table 1 Main results of included studies

Authors and year	Type of study	N	Goal	Interventions evaluated	Variables investigated	Summary of the results
Dawson et al. (2019)	Systematic review and meta-analysis	51	To investigate the evidence of the effects of mindfulness on physical and mental health in college students.	MBIs	Stress, anxiety, depression, well-being, rumination, mindfulness, self-compassion, blood pressure, sleep, life satisfaction, resilience, worry, and thought management	Compared with passive control – And when measured immediately after the intervention – MBIs improve stress, anxiety, depression, well-being, rumination, and mindfulness – With small to moderate effects, with no improvement in blood pressure, sleep, life satisfaction, resilience, worry, and thought control. Evidence for self-compassion is inconclusive.
Chiodelli et al. (2020)	Systematic review	19	Describe how MBIs are given at the university, systematize their results, and indicate possible limitations.	MBIs	Anxiety, stress, and depression, among others.	Increasing number of studies in the area. MBIs prove to be beneficial to mental health of the university student, regardless of its duration. Most studies investigated depression, anxiety, and stress. MBSR had greater empirical support of its effectiveness.

Cuevas-Toro et al. (2017)	Pilot experimental study without control group.	115	To evaluate the effects of a brief mindfulness program adapted to the classroom context.	Brief Mindfulness intervention – 7 sessions, 2 per week, a few minutes before class.	Level of mindfulness, experiential avoidance, anxiety, and life satisfaction	Increase in the level of life satisfaction and anxiety – State. The increase in satisfaction was due to the increased level of mindfulness, which coincided with the exam period. They conclude that a brief mindfulness intervention can benefit life satisfaction even in a period of anxiety such as the exam period.
Azevedo & Menezes (2020)	Quasi-experimental longitudinal study	13	To verify the effects of MBCT on stress, self-efficacy, and mindfulness in undergraduate students.	MBCT	Perceived stress, general self-efficacy, and mindfulness.	Perceived stress was reduced and there was an increase in perceived general self-efficacy and mindfulness. Reduced stress is related to increased general perceived self-efficacy and mindfulness; and increased self-efficacy is related to increased mindfulness.
Gallego et al. (2014)	Controlled clinical trial	125	To evaluate whether mindfulness can bring significant changes in symptoms of depression, anxiety, and stress in college students when compared to a physical activity intervention and passive control group.	Adapted MBCT Physical activity Passive control	Stress, anxiety, and depression.	Mindfulness showed more significant results in decreasing anxiety, stress, and depression compared to the other two groups.

(continued)

Table 1 (continued)

Authors and year	Type of study	N	Goal	Interventions evaluated	Variables investigated	Summary of the results
Falsafi (2016)	Randomized controlled clinical trial.	90	To compare the effects of two interventions – yoga and mindfulness, and also a passive control group, on levels of depression and anxiety in college students.	• 8-week mindfulness training • Mindfulness and compassion practices. • Yoga • Passive control	Depression, anxiety, stress, level of mindfulness, and self-compassion.	Both Mindfulness and yoga were beneficial in decreasing symptoms of depression and anxiety when compared to the control group. Self-compassion only increased in the mindfulness group. Both depression and anxiety continued to decrease in the mindfulness group between post- and FUP; in yoga they remained the same.
Firth et al. (2019)	Randomized controlled clinical trial	92	To understand the possible mediation of mindfulness on self-efficacy, academic performance, and coping skills with pain, and subsequently pain-induced stress.	1 – Mindfulness 2 – placebo – Listening to music 3 – Stay silent or look at a picture of a balloon for 5 min.	Positive and negative affect, perceived stress, life satisfaction, mindfulness, self-efficacy.	Both mindfulness and placebo decreased stress when compared to no intervention. The longer mindfulness intervention did not improve self-efficacy. It partly decreased stress.
Dvořáková et al. (2017)	Randomized controlled clinical trial	109	To evaluate the effectiveness and feasibility of a mindfulness training on the health and well-being of first-year college students.	1 – L2B – Learning to breathe and waiting list (passive control)	Depression, anxiety, life satisfaction, mindfulness, self-compassion, social connectedness, compassion, sleep quality, alcohol use, acceptability of the program	Decreased levels of depression, anxiety, and increased levels of satisfaction with life.

Sears and Kraus (2009)	Randomized controlled clinical trial	57	To evaluate cognitive distortions and coping styles as mediators in the effects of mindfulness on anxiety, negative and positive affect, and hope in college students.	• Passive control; • Brief meditation intervention focused on mindfulness; • Brief meditation intervention focused on loving kindness; • Long meditation combining the two.	Anxiety, positive and negative affections, irrational beliefs, coping styles, hope	The long meditation intervention mixing the two types (attentional and loving kindness) showed better results, significantly reducing anxiety, negative affect, and increasing hope. Changes in cognitive distortions mediated these changes.
Bai et al. (2020)	Randomized controlled trial	52	To evaluate the effects of an 8-session intervention on first-year college students'daily experience of stress and emotion regulation.	• Passive control – Waiting list • 8 mindfulness sessions – Just breathe (L2B adaptation) – 6 weeks.	Family and occupational stress, negative emotions, rumination, interference of thoughts with activities.	The control group had an increase in family-related stress, while the mindfulness group remained stable. The responses of emotional regulation to stress related to studies and work did not differ in the groups.
Demarzo et al. (2017)	Quasi-experimental controlled study, with 6-month follow-up	141	To evaluate the effectiveness of an 8- and 4-week program for wellness improvement – non-clinical population.	• 8 weeks, • 4 weeks, • Passive control	Mindfulness, self-compassion, positive and negative affect, anxiety, depression, and resilience	Regarding anxiety, the short intervention shows small but better results than the control group. The long intervention shows significantly better results. Both programs increase levels of mindfulness and positive affect.

(continued)

Table 1 (continued)

Authors and year	Type of study	N	Goal	Interventions evaluated	Variables investigated	Summary of the results
Bergen-Cico et al. (2013)	Quasi-experimental controlled study	119	To evaluate the potential mental health benefits of participating in a brief (5-week) mindfulness intervention based on MBSR added to a course.	• Short MBSR (5 weeks) • Control group with theoretical classes of the same time and duration	Mindfulness, self-compassion, and anxiety	Increase in the level of mindfulness and self-compassion. There was no significant reduction in anxiety. They think that to decrease anxiety more practice time is needed.
Dundas et al. (2016)	Controlled clinical trial	70	To evaluate whether the MBSR improves assessment anxiety and academic anxiety	• MBSR • Passive control	State and trait anxiety, academic self-esteem and self-esteem, and self-efficacy	Test anxiety dropped during intervention and continued to drop after intervention. Decrease in trace anxiety but not in state.
Galante et al. (2017)	Randomized controlled clinical trial	616	To assess whether providing mindfulness courses to college students would help them have greater resilience to stress.	• 8 weeks of Mindfulness + mental health support as usual • Just mental health support as usual	Psychological stress and well-being.	Mindfulness reduced stress immediately after the course. Stress increased in the control group throughout the academic year, while in the mindfulness group the decrease was obtained after the intervention and was the same during the exams. Mindfulness also improved well-being during exams compared with usual.
Galante et al. (2020)	Randomized controlled clinical trial	616	To evaluate, after 1 year - follow-up – Whether a mindfulness intervention benefited the stress resilience of college students.	• 8 weeks of Mindfulness + mental health support as usual • Just mental health support as usual	Psychological stress and well-being.	Psychological stress and mental well-being improved in the mindfulness group compared to the usual support group. The effects were somewhat smaller than during the examination period.

Greif & Kaufman (2019)	Quasi-experimental study	24	To determine the feasibility of a procedure to identify the relationship between preexisting traits and immediate to meditation mindfulness in college students	• A short mindfulness practice	Mindfulness, anxiety, cognitive tests of attention and executive functions.	Anxiety – State decreased after practice. Increased mindfulness-body awareness at post associated with higher levels of mindfulness-trait at baseline.
Hall et al. (2018)	Randomized controlled clinical trial	101	To investigate whether low-intensity mindfulness interventions can benefit the psychological health and sleep quality of college students.	• Passive control; • Mindfulness only; • Mindfulness and reminder by text message; • Mindfulness and text message with image of favorite animal.	Depression, anxiety, stress, and sleep quality.	After week 4 after the beginning of the intervention, there was improvement in anxiety, stress, depression, and sleep for all mindfulness groups compared to the control. This was maintained until week 7.
Hjeltnes et al. (2015)	Qualitative study	29	To qualitatively investigate the subjective experience of college students who participated in an MBSR course for academic anxiety.	• MBSR	Academic anxiety	Five patterns of most relevant themes emerged: (1) finding a source of internal calm; (2) sharing a human struggle/difficulty; (3) staying focused in learning situations; (4) getting out of fear and being curious in academic situations; (5) having more self-acceptance in difficult situations.

(continued)

Table 1 (continued)

Authors and year	Type of study	N	Goal	Interventions evaluated	Variables investigated	Summary of the results
Kim et al. (2020)	Randomized controlled clinical trial	247	To evaluate the daily trajectories of college students regarding stress, anxiety, depression, happiness, and mindfulness, comparing two interventions: mindfulness and stress management.	• Online mindfulness intervention and brief – 5 days • 20 to 30 min per day • Stress management intervention.	Depression, anxiety, stress, mindfulness, and happiness.	Equal linear decrease in both groups regarding anxiety and stress. Depression decreased only in stress management, and in mindfulness it remained stable. The increase in happiness happened only in mindfulness.
Seppälä et al. (2020)	Randomized controlled clinical trial	131	To examine the effects of 3 interventions on the mental health of college students: SKY campus happiness ("SKY"); foundations of emotional intelligence ("EI"); MBSR.	• SKY • EI • MBSR • Passive control group	Depression, stress, mental health, mindfulness, positive affect, and social connectedness.	MBSR did not benefit any of the variables compared to the other interventions. The SKY intervention benefited depression, stress, mental health, positive affect, mindfulness, and social connectedness. EI benefited mindfulness.
Sousa et al. (2021)	Randomized controlled clinical trial	40	To evaluate correlations between trait mindfulness and outcomes, and to compare the effects of a mindfulness intervention with an active control group.	• Brief mindfulness intervention – 30 min for 3 days • Active control – coloring	Mindfulness state and trait, anxiety state and trait, positive and negative affect, perceived stress, and cortisol.	Mindfulness group decreased state anxiety and perceived stress, and increased state mindfulness. Both groups decreased positive affect and cortisol. No change in positive affect.

Voss et al. (2020)	Randomized controlled clinical trial (restricted randomization)	73	To evaluate the effects of an MBI on participants' autonomic regulation – decreased stress.	• Mindfulness-based Student training Program (MBST) based on MBSR – 8 weeks 90 min per session plus a 5 hr. intensive session • Passive control group.	Electrocardiogram; plethysmography; respiratory activity.	The intervention positively influenced the autonomic regulation in relation to stress reduction. Some parameters changed in the intervention group and remained the same in the control group.
Shapiro et al. (2008)	Randomized controlled clinical trial	44	To assess whether increasing the level of mindfulness can mediate positive effects on psychological variables.	• MBSR • Eight point program (EPP) – waiting list control	Mindfulness, stress, rumination, forgiveness, and hope.	Both interventions improved college students'levels of mindfulness and attention. Increased levels of mindfulness significantly mediated decreases in perceived stress and rumination.
Svetlák et al. (2021)	Experimental study without control (open trial)	692	To evaluate the feasibility of an online mindfulness program for college students and its effects on perceived stress, negative affect, self-compassion, quality of life, emotion regulation strategies, and mindful skills.	• eMBP – Based on MBCT – 8 weeks for stress reduction – mixes interactive and online intervention, reminders, and support. 8 weeks	Mindfulness, subjective emotional balance, perceived stress, self-compassion, emotional regulation, subjective quality of life.	Decrease in perceived stress with moderate to large effect size. Decrease in perceived stress reactivity; increase in positive emotional experience, and decrease in negative (medium effect size), increase in self-compassion, increase in subjective mindful experience.

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Table 1 (continued)

Authors and year	Type of study	N	Goal	Interventions evaluated	Variables investigated	Summary of the results
Oman et al. (2010)	Randomized controlled clinical trial	44	To evaluate the effect of two interventions on levels of stress, rumination, forgiveness, and hope in college students – Follow-up results	• MBSR • EPP (eight point program – concentration meditation – use of mantras) • Waiting list control	Mindfulness, stress, rumination, forgiveness, and hope.	There were no significant differences between MBSR and EPP outcomes, both decreased stress, which was maintained at follow-up (of 8 weeks). Compared to controls, MBSR and EPP benefited stress, forgiveness, and minor benefits for rumination.
Long et al. (2021)	Randomized controlled clinical trial	208	To test the effects of a "mindfulness-based coping enhancement" program on stress management, emotional regulation, coping, and well-being in college students.	• Be REAL (resilient attitudes & living) • Passive control group	Mindfulness, perceived stress, emotion regulation, executive function, coping strategies, self-compassion, social connectedness, and well-being.	Compared to the control group, students who participated in the mindfulness intervention showed increased levels of mindfulness, self-compassion, happiness and resilience, improved executive functioning, better coping strategies, less perceived stress, and increased social connectedness. Most of these changes were maintained at follow-up.

Note: *MBCT* Mindfulness-Based Cognitive Therapy, *FUP* Follow-up

What Do These Results Tell Us?

This study aimed to assess the effects of mindfulness-based interventions on the mental health of college students, especially regarding stress and anxiety levels. According to the initial hypothesis from this study, the results point to the benefits of the practice on the mental health of this population.

The number of studies in the field of mindfulness and mental health, and of mindfulness for college student health has grown and show benefits of the intervention in health, regardless of its duration (Chiodelli et al., 2020).

The results of most experimental studies assessed by this integrative review are similar to the results found by Dawson et al. (2019) in their systematic review and meta-analysis, with a significant decrease in stress and anxiety, as well as benefits found for other variables, such as improvement in depression, well-being, and mindfulness. In the studies that followed the sample for longer for further evaluation and showed that mindfulness interventions were related to a decrease in stress, having similar results to the comparison intervention or not, their results remained significant in the follow-ups, suggesting that the practice may benefit the management of stress in the long term (Falsafi, 2016; Long et al., 2021; Oman et al., 2010). Most studies that assessed perceived stress showed a decrease in this variable, including physiological changes as seen in the study of Voss et al. (2020).

With regard to academic anxiety, results point to positive effects on stress during exams and also a lasting effect of the intervention seen at follow-up (Galante et al., 2017, 2020). Furthermore, a significant decrease in exam anxiety was seen during the intervention and continued to decrease after the intervention (Dundas et al., 2016). These are promising results given the distress caused by academic and performance anxiety and its outcomes on students'academic and professional lives (APA, 2014).

From the 26 studies included in this review, anxiety and stress variables were not benefited or worsened in only 3 of them (Bergen-Cico et al., 2013; Cuevas-Toro et al., 2017; Seppälä et al., 2020). In the study of Cuevas-Toro et al. (2017), there was an increase in state anxiety, however, data collection coincided with the exam period, and the study did not have a control group to assess whether students who did not receive the intervention would also increase their level of anxiety. In addition, the authors show that there was an increase in the level of life satisfaction, even with the worsening of anxiety in the period of tests, which suggests benefits of the intervention. On the other two studies, mindfulness interventions only did not have significant results when compared to another intervention, but there was no associated worsening to the intervention (Bergen-Cico et al., 2013; Seppälä et al., 2020). Bergen-Cico et al. (2013) suggest that to promote a significant effect on anxiety the mindfulness intervention should be longer. In the study by Demarzo et al. (2017) the longer intervention also showed significantly better results on anxiety when compared to the shorter one. This was also the case in the study by Sears and Kraus (2009) in which the longer intervention (with longer practices) and which mixed elements of mindfulness and compassion, also had better results for anxiety when

compared the interventions brief ones. This is perhaps an important result to take into account when considering the clinical applicability of this type of intervention. Although in the study by Chiodelli et al. (2020) the results suggested that shorter interventions also benefit students'mental health, perhaps for anxiety the interventions should be longer.

Although some studies justify the effectiveness of mindfulness interventions due to the mediation of increased mindfulness levels (Azevedo & Menezes, 2020; Shapiro et al., 2008), this mediation cannot be seen in all studies, for example in the study of Bergen-Cico et al. (2013). In addition, few studies have sought to explain the mechanisms of action of mindfulness-based intervention. We hypothesize that the improvement in anxiety and stress levels in college students found in this study are not only related to the increased level of mindfulness promoted by the intervention, but also to the decrease in rumination and worry, mechanisms of action indicated as mediators of the effects of MBIs on depression, anxiety, and stress (Desrosiers et al., 2013), variables that were not included in most studies.

Conclusion

This study found evidence pointing to an important benefit of the use of mindfulness-based interventions for university students'mental health, especially regarding lower stress, increased well-being, lower test anxiety, and general anxiety. Mindfulness-based interventions can be important allies in the mental health care of students within the university. It is suggested that MBIs be introduced in the curricula at universities as a form of mental illness prevention and health promotion for the university population.

Limitations

It is important to highlight that the studies included in the integrative review have limitations, such as the methodology used, some did not have a control group, most did not perform follow-up, many did not mention the blinding of the evaluators, and the restricted number of participants. Studies with a better methodology are suggested, especially those that include active and passive control groups, double blinding, and medium and long-term follow-up.

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