

Meditation and Its Impacts On Social Determinants of Mental Health Among University Students

Meditação e os Impactos nos Determinantes Sociais de Saúde Mental de Universitários

La Meditación y Sus Impactos en los Determinantes Sociales de la Salud Mental en Estudiantes Universitarios

RESUMO

Objetivo: Analisar o impacto de práticas meditativas em universitários com sofrimento psíquico mapeando os determinantes sociais de saúde mental (DSS). **Método:** Estudo misto exploratório conduzido por meio de *survey* sobre os DSS; acompanhamento das variações da frequência cardíaca (FA) e pressão arterial (PA) antes e após 24 sessões de 1 hora de meditações no método *Suseonjae* e dados do *Self-Report Questionnaire* (SRQ-20). **Resultados:** Dos 34 participantes (média de 23.4 anos) 100% sentiam-se nervosos, tensos e preocupados antes da intervenção. As análises do SRQ-20 no pós-intervenção dos 12 participantes, que concluíram o protocolo, evidenciaram uma importante redução de sintomas ($p=0,0004$). A PA sistólica também apresentou alteração benéfica e 84% dos participantes referiram que a intervenção atenuou os impactos da pandemia na sua saúde mental devido à previsibilidade do cuidado semanal e organização corpo e mente pela meditação. **Conclusão:** Impacto no bem-estar e redução de agravos ao promover autocuidado e resiliência frente aos fatores adversos cotidianos decorrentes dos DSS.

DESCRIPTORES: Meditação; Saúde Mental; Estudantes; Determinantes Sociais da Saúde.

ABSTRACT

Objective: To analyze the impact of meditative practices on university students with psychological distress by mapping the social determinants of mental health (SDH). **Method:** Exploratory mixed-method study through a survey on SDH; monitoring of heart rate and blood pressure variations before and after 24 meditation sessions in the *Suseonjae* method for 1 hour and data from the *Self-Report Questionnaire* (SRQ-20). **Results:** Of the 34 participants (mean age of 23.4 years), 100% felt nervous, tense and worried. Analysis of the SRQ-20 after and at the end of 12 participants showed a significant reduction in symptoms in the Wilcoxon test of $p=0.0004$. Only systolic BP was significant (initial $P=0.0066$ and final $P=0.0120$) and 84% reported attenuation of the impacts of the pandemic on their mental health due to the predictability of weekly care and organization of body and mind through meditation. **Conclusion:** Impact on well-being and reduction of injuries by promoting self-care and resilience in the face of daily adverse factors resulting from SDH.

DESCRIPTORS: Meditation; Mental Health; Students; Social Determinants of Health.

RESUMEN

Objetivo: Analizar el impacto de las prácticas meditativas en universitarios con sufrimiento psíquico, mapeando los determinantes sociales de la salud mental (DSS). **Método:** Estudio mixto exploratorio realizado mediante una encuesta sobre los DSS; seguimiento de las variaciones de la frecuencia cardíaca (FC) y la presión arterial (PA) antes y después de 24 sesiones de una hora de meditación con el método *Suseonjae*, y recopilación de datos del *Self-Report Questionnaire* (SRQ-20). **Resultados:** De los 34 participantes (edad media de 23,4 años), el 100% se sentía nervioso, tenso y preocupado antes de la intervención. Los análisis del SRQ-20 después de la intervención, en los 12 participantes que completaron el protocolo, mostraron una reducción significativa de los síntomas ($p=0,0004$). La presión arterial sistólica también presentó una mejora, y el 84% de los participantes informaron que la intervención redujo los impactos de la pandemia en su salud mental debido a la previsibilidad del cuidado semanal y a la organización cuerpo-mente promovida por la meditación. **Conclusión:** Se observó un impacto positivo en el bienestar y una reducción de los agravantes al promover el autocuidado y la resiliencia frente a los factores adversos cotidianos derivados de los DSS.

DESCRIPTORES: Meditación; Salud Mental; Estudiantes; Determinantes Sociales de la Salud.

RECEIVED: 09/17/2025 APPROVED: 10/02/2025

How to cite this article: Pereira AP, Gherardi-Donato ECS, Fiorati RC. Meditation and Its Impacts On Social Determinants of Mental Health Among University Students. *Saúde Coletiva* (Edição Brasileira) [Internet]. 2025 [acesso ano mês dia];16(101):17344-17359. Disponível em: DOI: 10.36489/saudecoletiva.2025v16i101p17344-17359

**Amanda Polin Pereira**

PhD student in the Interunit Doctoral Program in Nursing (EERP/USP). Master of Science from the Interunit Graduate Program in Bioengineering (USP).

ORCID: <https://orcid.org/0000-0003-4687-6342>

**Edilaine Cristina da Silva Gherardi-Donato**

Full Professor and Coordinator of the Center for Mindfulness and Integrative Therapies (CEMITI) at the Ribeirão Preto College of Nursing, University of São Paulo (EERP-USP). Bachelor's degree in Nursing from the Ribeirão Preto College of Nursing, USP. Master's and PhD in Psychiatric Nursing from EERP-USP. Postdoctoral studies at the University of Alberta, Canada. Professor and

Senior Mindfulness Instructor.

ORCID: <https://orcid.org/0000-0001-7475-6650>

**Regina Célia Fiorati**

Associate Professor in the Department of Health Sciences at the Ribeirão Preto Medical School – University of São Paulo (USP). Senior Visiting Professor at the Faculty of Medicine, University of Seville, Spain. Master's and PhD in Mental Health and Sciences from the Graduate Program in Psychiatric Nursing at the Ribeirão Preto College of Nursing, University of São Paulo. Postdoctoral studies in Public Health at the Faculty of Medicine, Autonomous University of Madrid, Spain.

ORCID: <https://orcid.org/0000-0003-3666-9809>

INTRODUCTION

Understanding the unique factors that influence university students' mental health processes is a key issue today, given the high demand for support services both within and outside institutions. The comprehension of living conditions, housing, access, existing health inequities, and the impact of the pandemic on university mental health has been the subject of research and action in response to the high demands for care.

The social determinants of mental health (SDH), intensified by the adverse conditions of the pandemic, have contributed to certain groups of students experiencing greater psychological distress during and after the pandemic.

The university period is already marked by critical factors for mental health, due to issues of personal growth and professional opportunities that generate increased stress levels, risky behaviors, and maladaptive coping strategies, such as substance use (alcohol and drugs)⁽¹⁾.

The pandemic period has only highlighted the growing situation of psychological suffering. Smit and Stavroulakis⁽²⁾ believe that college students were under extreme stress, given that, at this point in their lives, stressors such as academic pressure,

financial challenges, and the shift toward greater independence are already present, all of which contribute to increased mental health issues.

Among the various factors that contributed to the increase in psychological distress during the COVID-19 pandemic, social isolation stood out. The lockdown imposed during the holiday season and end-of-year festivities negatively impacted access to social support and the ability to carry out normal activities⁽³⁾. The uncertainties of that period, combined with the restriction of important practices for emotional regulation—such as sports and leisure—, conflicts in family life, and frustrations arising from difficulty concentrating on studies, as well as insecurity regarding tests and assessments, generated suffering that went beyond the direct effects of isolation⁽⁴⁾.

Among the health inequities identified, limited access to mental health care among university students stands out, especially regarding individualized psychological support. In El Morr's study⁽⁵⁾, it was observed that 64.1% of participants did not have access to this type of care. Furthermore, given the high demand, university counselors frequently refer students to waiting lists or external services, highlighting the insufficient resources available at higher education institu-

tions.

Social support, an aspect of positive coping with well-being, was significantly impacted by the distancing measures necessary to reduce the spread of COVID-19, but some groups suffered greater losses; social distancing policies specifically negatively affected Black students⁽⁶⁾.

Arts and Humanities students in Spain showed a higher prevalence of symptoms of depression, anxiety, and stress compared to students in other fields. This situation worsened during the pandemic, influenced by multiple factors, including the closure of practical activities at conservatories and cultural institutions, which further compromised the academic and emotional development of these students⁽⁷⁾.

Regarding university management and mental health care for undergraduates, Dorais and Gutierrez⁽⁸⁾ highlight that concerns about psychological well-being have been steadily increasing on university campuses. However, many institutions lack qualified staff or sufficient financial resources to meet the growing demand for counseling services, resulting in overcrowding and limited access to necessary support.

Among the findings on mental health care strategies for university students during the pandemic, meditation practices stood out in research

for their positive impact on well-being, reducing stress, anxiety, and depression levels, and increasing mindfulness. In a study that investigated coping strategies considered most beneficial for mental health—including aspects such as suicidal ideation and self-harm—19% of the 104 university students interviewed identified meditation as one of the most effective resources, ranking second among the strategies with the greatest positive impact, according to participants⁽⁹⁾.

Promoting student well-being during times of crisis was highlighted in Luberto's research⁽¹⁰⁾, which demonstrated how mindfulness practice contributed to coping with the pandemic, promoting the development of specific skills such as attentional focus, appreciation of the present moment, cognitive decentralization, and emotional non-reactivity. In this context, online meditation-based interventions have emerged as viable and low-cost alternatives for mental health care for university students, especially given the high demand for psychological support services in higher education institutions⁽¹¹⁾.

Meditation practices, according to findings from the pandemic period, have proven to be effective strategies for addressing the overload of mental health and student support services. Given this scenario, this study was guided by the following guiding question: Did meditation practices impact the social determinants of undergraduate students' mental health during the pandemic?

MATERIALS AND METHODS

This is an exploratory mixed-method study conducted between 2023 and 2024 at a public university in the interior of the state of São Paulo with undergraduate Occupational Therapy students (a group with the greatest vulnerability and needs for continuing education grants, mapped within the

forementioned institution).

The research was approved by the Course Organizing Committee, the Undergraduate Committee, and the Research Ethics Committee (CAAE: 3 59380922.0.0000.5393).

The research was conducted through two sequential stages:

Stage 1: qualitative, exploratory, descriptive and cross-sectional.

Stage 2: quantitative, exploratory, descriptive and cross-sectional quasi-experimental study.

Research collection instruments

- DSS Questionnaire: Developed by the lead researchers, this survey was approved by 12 expert judges before being administered to participants.

During the analysis process, the data were analyzed using simple statistics and thematic content analysis in the ATLAS.ti program.

- Self-Report Questionnaire (SRQ-20): This is a screening instrument used to identify possible common mental disorders, such as symptoms of depression, anxiety, and stress, allowing the assessment of the presence or absence of psychological distress. In this study, the SRQ-20 was used as the screening criterion for selecting participants for Study 2. A score equal to or greater than 7 (≥ 7) was adopted as the cutoff point, as evidenced by previous Brazilian studies that indicate this value as a reference for suspected mental distress. (12,13)

- Blood Pressure and Heart Rate Measurement: Monitoring before and after the 24 one-hour meditation sessions.

SRQ-20 data analysis was performed using the Wilcoxon test for paired data and the McNemar test. The results of pre- and post-intra and inter-subject CFV and BP were analyzed using the Wilcoxon test and the nonparametric Friedman test using R software (version 4.3.1). (14)

The intervention tested consisted

of a meditation protocol. The technique adopted was Suseonjae Meditation, a method originating in South Korea, implemented in this study by the lead researcher based on her training and personal practice. The sessions consisted of a sequence of initial muscle relaxation and joint mobilization exercises, performed through rocking movements, touching, rubbing, and stretching of the neck, upper limbs, trunk, and lower limbs. This 30-minute session aimed to stimulate acupuncture points and promote improved blood and energy circulation.

Following this, a conscious breathing practice focused on the region below the navel, known as Danjeon (the traditional energy respiratory center), was performed in the supine position. This stage included verbal instructions for body relaxation and the use of natural sounds to induce states of tranquility and mental calm. The sessions lasted 30 minutes each and were held twice a week, totaling 24 sessions throughout the protocol.

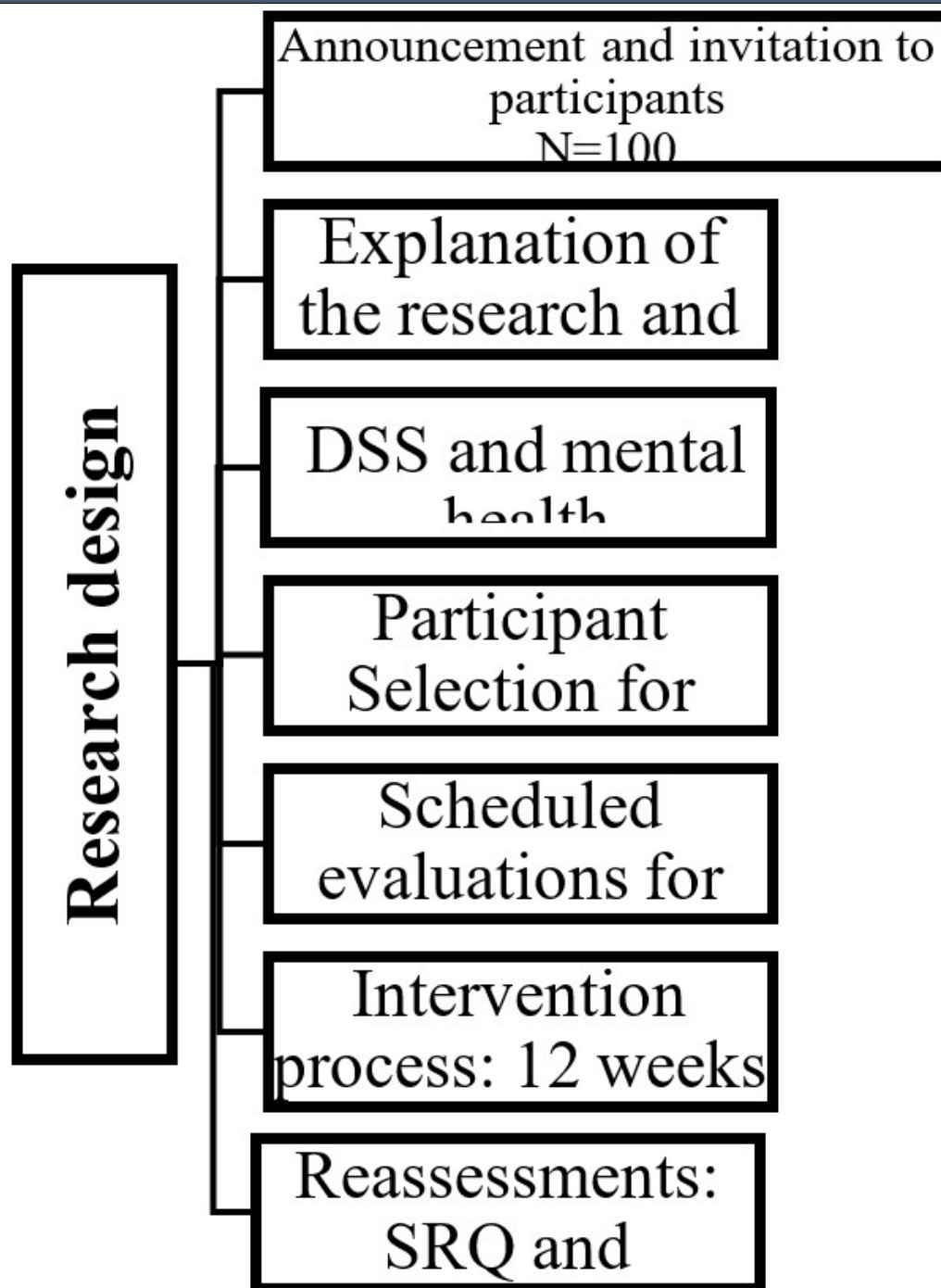
Sample description

Research participants were invited via institutional email and pamphlets, and all signed an informed consent form.

The inclusion criteria for Study 1 were: age over 18, enrolled and pursuing an Occupational Therapy degree in any year of study; and for Study 2, participants scored 7 or higher on the SRQ-20.

The exclusion criteria for Study 1 were: graduate Occupational Therapy students who had completed their course; and for Study 2, students who had discontinued or declined to continue meditative practices, had a diagnosis of a mental disorder with or without psychiatric follow-up, and were taking psychotropic and/or antihypertensive medications.

Figure 1 - Research design



Source: own authorship.

RESULTS

Qualitative approach

Study 1 investigated the social determi-

nants of mental health (SDMH) among college students through a survey with open- and closed-ended questions. Thirty-four students participated, with their demographic profiles described in Table 1.

Table 01 - Demographic profile and income of participants

DEMOGRAPHIC PROFILE	
<i>Average age</i>	23.4 years
<i>Gender</i>	100% female
<i>Self-declared color</i>	85.2% white
	2.9% yellow
	11.7% brown
	2.9% black
INCOME	
<i>Average Individual Amount</i>	\$1.185,00
<i>Participant Income Source</i>	35% Scholarship 23% Family 35% Family and Scholarship
	2% Scholarship and informal work 5% Family, scholarship, and informal work

Source: own authorship.

The majority of university admissions were through Fuvest (78%), followed by social quotas (17%) and racial quotas (5%).

Regarding psychosocial and environmental aspects, 94% of participants reported emotional and routine changes during the pandemic. The majority, 76%, indicated having someone to turn to in times of emotional difficulty, 47% were undergoing therapy, and 26% used services offered by the university during the pandemic. Only two participants lived alone, while the majority lived with family (15 participants) or with friends in shared apartments (15 participants). All reported feelings of insecurity due to violence in the neighborhood. Harmful environmental conditions were also mentioned, such as a lack of green spaces, noise pollution, excessive trash, and poor urban infrastructure. Coexistence conflicts, especially in shared apartments, emerged as sources of stress, compounding structural problems in

the properties.

Regarding their support network and community integration, 68% reported maintaining ties with their neighborhood. The remainder cited difficulties due to their academic routine and the temporary condition of living in their home. Although all participants had access to essential services, such as basic sanitation, electricity, and public safety, two participants lacked local health services, and four reported a lack of cultural and leisure spaces nearby.

Regarding leisure activities, 91% of students reported participating in some activity, 55% of which were cultural and 41% athletic. Transportation was predominantly by public transportation, including buses and walking. Regarding spirituality, 58% reported having a religion, and 47% said they practiced it regularly. Religious traditions included Catholicism, Spiritism, Umbanda, Evangelism, Taoism, and Adventism.

Regarding institutional macro-determinants, 70% reported difficulties

concentrating and learning during the pandemic. A total of 55% expressed concern about the loss of content, and 79% expressed concerns about professional training. Regarding the university's institutional communication during the pandemic, 83% considered information about COVID-19 sufficient, with email being the primary means of communication.

The university's initiatives were perceived ambiguously. Among the positive aspects, the discussion groups and lectures stand out. However, negative actions were also mentioned, as revealed by participant P16: "Irregular and inconsistent decisions regarding the medical program..."

Participant P14 highlighted: "Increased flow of people, wait times, crowded buses..."

P21 pointed out: "Hasty return to practices, backlog of work."

Regarding meditation, 84% of participants had already tried the practice. After the intervention, the same percentage reported that the practice helped mitigate the impacts of the pandemic, and all attributed a positive effect on mental health.

Qualitative analysis using Atlas.ti software revealed central thematic categories. Participants described reduced anxiety, perceiving the practice as a safe and welcoming space. They also reported increased well-being, improved mood, and improved sleep. A growth in personal awareness was observed, with reports of greater self-knowledge and mental and physical clarity. Emotional balance was also mentioned, with an emphasis on slowing down and tranquility. Participants also indicated greater emotional management skills in the face of frustration and stress, as well as changes in self-perception and an appreciation for predictable care.

Among the reports, that of participant P9 stands out: "It provided space to understand the impacts of the pandemic on my body, anxiety and loneli-

ness, for example, and taught me ways to reduce these sensations and take better care of my body and mind.”

Participant P12 stated: “The meditation experience also became a space for exchanges and affection, in which I felt very welcomed.”

Quantitative approach

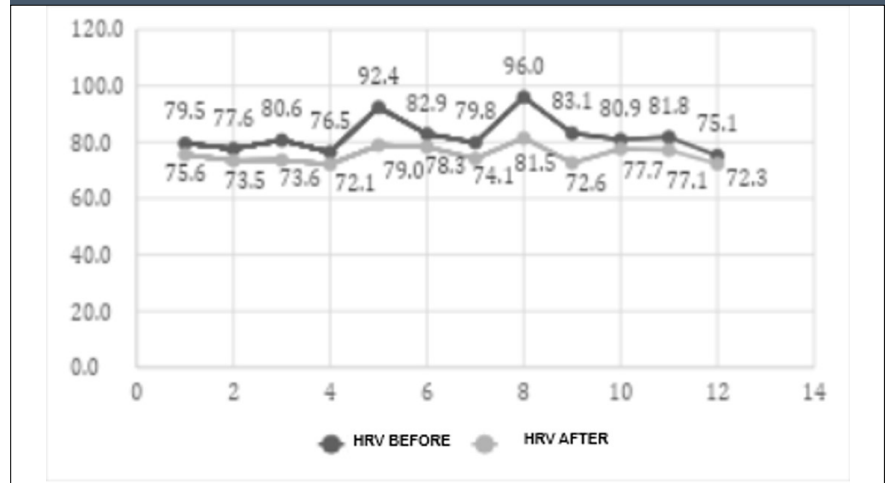
In Study 2, the effects of meditation practice on symptoms of psychological distress, heart rate variability (HRV), and blood pressure (BP) were evaluated.

Of the initial 34 participants, five with SRQ-20 scores below the cutoff point (≥ 7) and ten with a diagnosis or use of psychotropic medication were excluded. Nineteen students were then invited, of whom 14 began and 12 completed the 24 intervention sessions. One student dropped out due to starting medication treatment and another due to family care needs.

Regarding the effects on psychological distress, a significant reduction in the mean number of symptoms on the SRQ-20 was observed, which decreased from 11.5 at the beginning to 5 at the end of the intervention. This difference was statistically significant according to the Wilcoxon test ($p = 0.0004$). At the end, nine participants had scores below the cutoff point (less than 7), indicating clinical remission of psychological distress.

Regarding the physiological effects, there was no statistically significant difference in heart rate variability measures (HR before meditation: $p = 0.6767$; after: $p = 0.1990$). However, systolic blood pressure showed a significant reduction both before ($p = 0.0066$) and after meditation ($p = 0.0120$). Diastolic blood pressure showed a significant reduction only in the measurement before the practice ($p = 0.0024$), not being maintained after meditation ($p = 0.6779$). Table 02 presents the HRV data obtained before and after the sessions.

Table 02 – Comparisons of HRV before and after meditation



Source: own authorship.

DISCUSSION

Research on meditation and psychological distress among university students within the DSS (Social Security Institute) allowed us to map the mental health challenges faced by universities worldwide in this group.

Situations such as intense academic workloads, clinical responsibilities, and mental health issues were already factors associated with stress before the pandemic and were exacerbated by COVID-19⁽¹⁶⁾.

According to the research findings, issues such as the loss of content and practical activities impacted mental health. Data confirmed in the literature that concerns about future studies and school organization, such as internship cancellations and delays, as well as the challenges of remote learning, contributed to psychological distress⁽¹⁷⁾.

Housing issues such as complications about living on campus and lack of space, crowded roommates/family, and the lack of silence necessary for studying appear in research associated with negative feelings^(1,18). Location, commute time to university, and perceived insecurity were factors contributing to psychosocial stress

among undergraduates. Depression in a study of university students in Germany was linked to the challenges experienced in digital learning, financial demands, and reduced social contact⁽¹¹⁾.

Meditation interventions impacted less self-judgment, self-censorship, self-anger, and self-disappointment with increased awareness, self-care, and self-compassion⁽¹⁶⁾. Meditations alleviated negative thoughts and feelings during times of deprivation and isolation, creating a mental sense of happiness and a return to normal activities. This was an important coping tool for university students during practical sessions⁽¹⁸⁾.

Vulnerable groups may benefit from mind-body programs as discussed if they are designed with culturally competent approaches and collectivist values, as in research in which Hispanic and Black students benefited, contradicting the acceptance of the practices in population findings⁽¹⁹⁾.

CONCLUSION

The findings of this study and the comprehensive development of various types of meditation care presented in global research demonstrate the

positive effects of meditation practices on maintaining well-being and preventing worsening psychological distress among university students. Furthermore, acceptance of and interest in meditation practices among undergraduates, regardless of religious and/or spiritual affiliation, has been observed worldwide during the pandemic, with the increased availability of meditations and studies in this field.

The macro-determinants related to economic, cultural, and environmental conditions, which have a significant influence on the SDGs of the proximal strata, are important for the development of policies on care, access, and economic support, as well as scientific analyses of the demands and impact of the care offered to understand the long-term effects. Establishing care, support, and potential intervention projects within the university

study routine are a priority in this process. Meditation as a form of self-care, recommended in the new national curriculum guidelines, must be established with predictability within the curricular syllabus, thus allowing the construction of the relevance of health promotion, protecting and reducing the harm caused by psychological distress in university students.

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ACKNOWLEDGMENTS

This work was carried out with support from the Coordination for the Improvement of Higher Education Personnel - Brazil (CAPES) - Financing Code 001.