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Commentary

Mindfulness in the Brazilian National Health System (SUS): Why Training Instructors Is Not Expensive but Strategic and Cost-Effective

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Background: It is often argued that training mindfulness instructors would be too expensive to be feasible within a public health system such as Brazil's Unified Health System (SUS). This essay challenges that perception by combining epidemiological estimates, illustrative cost analysis, and evidence from national and international experiences.

Methods: Using population-based planning benchmarks, we estimated the number of instructors required for nationwide implementation of mindfulness-based interventions (MBIs) in the SUS. We calculated training costs and added illustrative estimates of ongoing maintenance (refresher training, attrition replacement) and delivery costs under two explicit scenarios (task-shifting within existing teams vs. additive dedicated time), comparing all estimates to key health expenditures. Evidence from recent systematic reviews and Brazilian trials of the Mindfulness-Based Health Promotion (MBHP) program was also reviewed, alongside contrary international evidence.

Results: Between 8,400 and 11,200 instructors would be required to cover the SUS population, at an estimated one-time training cost of R\$126-168 million (Brazilian reais; <0.1% of the SUS annual budget). Even under a combined conservative estimate that adds ongoing maintenance and additive delivery costs (~R\$165-221 million/year), the investment remains below one year's national expenditure on psychiatric medications (~R\$500 million/year) and under 0.1% of the annual SUS budget. Evidence shows that MBIs, including MBCT and MBHP, are effective and cost-effective for reducing depression, anxiety, and psychological distress in adults, though evidence in children and adolescents is mixed.

Conclusion: Training mindfulness instructors is not expensive relative to the comparators examined and represents a strategic investment. This conclusion holds even after incorporating delivery, maintenance, and workforce costs alongside training. For Brazil, where the PNPIC already provides policy support, a progressive national training plan appears feasible and affordable, though it should be piloted and formally costed before large-scale rollout.

Introduction

It is often argued that training mindfulness instructors would be too expensive to be feasible within a public health system such as Brazil's Unified Health System (SUS). At first glance, the argument seems plausible: training programs require time, human resources, and institutional investments. However, when the full set of costs is examined — including delivery and maintenance costs beyond training itself — the investment remains modest relative to existing recurrent expenditures.

Brazil carries a substantial mental health burden: national health survey data show self-reported depression prevalence among Brazilian adults rose from 7.6% in 2013 to 10.2% in 2019, with just over half of those affected seeking care, predominantly through private clinics rather than the SUS ^{[1][2][3]}; psychiatric medication use is correspondingly widespread within SUS primary care. This burden motivates the search for scalable, low-cost complementary approaches; it does not, by itself, establish that mindfulness training is the optimal use of scarce resources relative to other approaches, a question this essay addresses only partially (see Evidence-based Approach and Limitations).

This essay critically examines the perception that training mindfulness instructors is financially unfeasible within the SUS. Its objectives are: (i) to demonstrate, through illustrative numerical estimates that include delivery and maintenance costs, that the investment required for a national network of instructors remains comparatively small; (ii) to compare this cost with other existing health expenditures, particularly psychiatric medications; and (iii) to discuss the strategic case for investing in mindfulness within the SUS framework, while being explicit about the assumptions and limitations of this analysis.

Accordingly, this paper is presented as a reflective position essay, not a formal cost-effectiveness analysis, using illustrative, order-of-magnitude estimates rather than a fully specified economic model; where figures are approximate or rest on stated assumptions, this is flagged explicitly (see Assumptions and Limitations). Its claims should be read as advocacy for further formal costing and piloting, not as a substitute for it.

Population Needs and Service Planning

Brazil's population is approximately 210 million people, of whom an estimated 75% depend exclusively on the Unified Health System (SUS), as only about one-quarter of the population is covered by private health plans ^{[4][5]}. This corresponds to roughly 155-160 million Brazilians who could potentially benefit from mindfulness-based interventions (MBIs) as part of a public health strategy.

To estimate the workforce requirements for delivering MBIs at scale, international service planning models can be used. Patten & Meadows ^[6] and subsequent analyses ^[7] propose benchmarks based on population ratios. If we adopt a conservative ratio of one trained instructor for every 20,000 inhabitants, the SUS would need approximately 8,400 instructors to cover its population. In a broader scenario, aligned with international references suggesting one instructor per 15,000 inhabitants, the number rises to about 11,200 instructors.

These figures are comparable to the scale of other national health programs. Brazil's Family Health Strategy has deployed more than 40,000 multiprofessional teams across the country, and the "Mais Médicos" Program recruited over 15,000 physicians at its peak [8]. Training a network of 8,400-11,200 mindfulness instructors is modest by comparison, though instructor training alone does not guarantee delivery capacity, as discussed below.

How Much Would This Cost the System?

Training costs

The training of each instructor can be estimated at approximately R\$15,000 (Brazilian reais; approximately USD 3,000) [7]. Training the entire national network would require between R\$126 million (8,400 instructors) and R\$168 million (11,200 instructors) — in practical terms, less than R\$1 per SUS user. Spread over a decade as part of a progressive implementation plan, the annualized cost would be only R\$12-17 million per year.

Delivery costs

Training instructors does not, by itself, deliver interventions to the population; someone must subsequently facilitate MBI sessions, and this delivery cost is estimated below. Two scenarios illustrate the range of plausible costs:

Scenario A — task-shifting within existing teams: instructors are drawn from health professionals already salaried within SUS multiprofessional teams (e.g., "eMulti - Equipes Multiprofissionais na Atenção Primária à Saúde" [9] — expanded primary care-type teams), who incorporate MBI facilitation as part of their existing scope of practice, analogous to how physiotherapists or nutritionists already operate within these teams. Under this scenario, the marginal monetary cost of delivery is near zero; the real cost is the opportunity cost of time reallocated from other activities, which is not quantified here.

Scenario B — additive dedicated time: if approximately 20% of an instructor's working time (about one day per week) is specifically dedicated to MBI delivery and is not otherwise absorbed by existing team capacity, this would represent an additional cost. Using an illustrative average annual SUS multiprofessional salary on the order of R\$70,000 (an approximation, not an official statistic), 20% dedicated time per instructor implies approximately R\$14,000/instructor/year, or R\$118-157 million/year across the full network — a materially larger figure than the training cost alone.

Maintenance costs

Instructors require periodic refresher training and supervision to maintain fidelity and reduce "drift," and some will leave the system due to illness, career change, or burnout, requiring replacement training. Assuming, illustratively, 10% annual attrition (replacement at full training cost) and refresher/booster training for the remaining instructors (at approximately 20% of initial training cost), maintenance would add approximately R\$35-47 million per year — substantially more than the annualized training cost alone.

Combined estimate

Summing the annualized training cost, illustrative maintenance costs, and the more conservative additive-delivery scenario yields a combined estimate of approximately R\$165-221 million per year. This remains below one year's national expenditure on psychiatric medications (~R\$500 million ^[1]) and under 0.1% of the 2025 SUS annual budget (>R\$230 billion ^[2]). We consider this an important test of the essay's central claim: even after incorporating delivery and maintenance costs alongside training, the conclusion that training (and operating) a national instructor network is comparatively inexpensive appears to hold, though with a narrower margin than a training-only comparison would suggest. Table 1 summarizes these comparisons; Figure 1 depicts them on a logarithmic scale.

Item	Estimated Cost (R\$ millions)	Training as % of Comparator
Training of 8,400-11,200 instructors (one-time)	126-168	~30% of one year of psychiatric meds
Training of 8,400-11,200 instructors (annualized, 10 years)	~12-17 / year	~2-3% of annual psychiatric meds
Ongoing maintenance: booster/refresher training + replacement of attrition (annual, illustrative; see Assumptions)	~35-47 / year	~7-9% of annual psychiatric meds
Delivery of MBIs under a task-shifting/integration model (existing multiprofessional teams; marginal cost)	~0-negligible (opportunity cost only)	—
Delivery of MBIs under an additive/dedicated-time model (illustrative, 20% FTE per instructor)	~118-157 / year	~24-31% of annual psychiatric meds
Combined conservative estimate (annualized training + maintenance + additive delivery)	~165-221 / year	~33-44% of annual psychiatric meds
Psychiatric medications (annual)	~500	—
Annual SUS budget (2025)	>230,000	<0.1%, even under the combined conservative estimate

Table 1. Comparative estimated costs of training and operating a national mindfulness-instructor network in the SUS, compared with psychiatric medication expenditures and the overall SUS annual budget (values in millions of R\$).

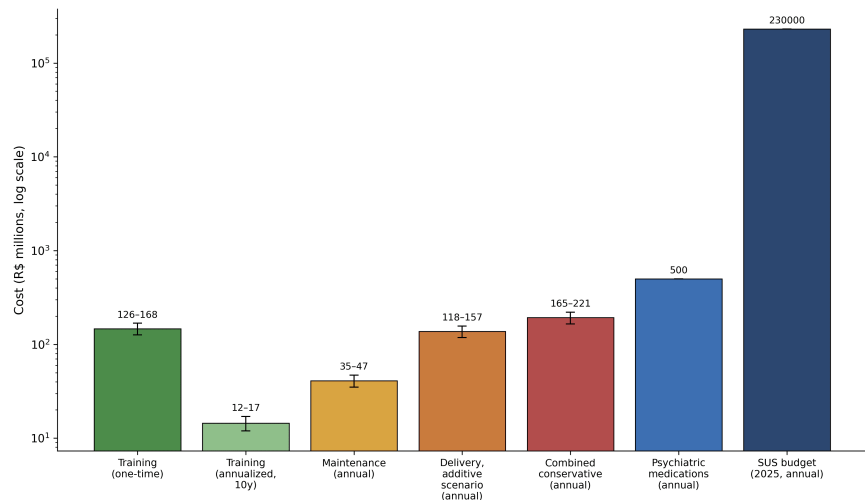


Figure 1. Relative annual/one-time costs of training and operating a national mindfulness-instructor network, compared with psychiatric medication expenditure and the SUS total annual budget (logarithmic scale, values in millions of R\$). Error bars show the low–high range of each estimate.

Clarifying the comparison with medication costs

Characterizing psychiatric medication as a uniformly "continuous and recurrent" cost is an oversimplification: for some patients and conditions, effective pharmacological treatment leads to remission and eventual discontinuation, whereas for others (e.g., chronic recurrent depression, psychotic disorders) medication may indeed be lifelong. The comparison in Table 1 should therefore be read as a comparison of aggregate, population-level recurrent expenditure (which does recur annually at the health-system level regardless of individual discontinuation) rather than a claim about any individual patient's trajectory.

We also clarify that this essay does not assume MBIs would substitute for psychiatric medication on a one-to-one basis. The more realistic and intended framing is that MBIs would be implemented alongside existing pharmacological and psychotherapeutic care. There is, nonetheless, some evidence for this more modest substitution effect over time: MBCT has been shown to reduce relapse rates in recurrent depression, allowing some patients to remain stable without long-term pharmacological treatment ^{[10][11]}, and population-level analyses suggest MBCT is associated with reduced healthcare utilization ^[12], which together provide indirect support for the possibility of gradually decreased medication reliance within the SUS (see Evidence-based Approach) without MBIs being proposed as a categorical replacement.

Assumptions and Limitations

This essay rests on several explicit assumptions that should be verified through formal research and piloting before large-scale investment: (i) that the positive effects of MBIs on population-level mental health outcomes are reasonably durable and do not fully dissipate between booster sessions; (ii) that MBI training, once completed, requires only the periodic maintenance estimated

above rather than more frequent recertification; (iii) that a meaningful share of delivery can be absorbed via task-shifting within existing multiprofessional teams (Scenario A) rather than requiring additive staffing (Scenario B) across the whole network; (iv) that instructors trained centrally can be retained within the public system at the attrition rate assumed; and (v) that the population-ratio benchmarks (1:15,000–1:20,000) developed in other health systems transfer reasonably to the Brazilian context.

Further limitations include: this is a reflective essay rather than a formal cost-effectiveness or budget-impact analysis, and the cost figures should be treated as order-of-magnitude illustrations rather than precise estimates suitable for budget allocation; patient preferences and acceptability relative to medication or other psychotherapies are not empirically assessed here; potential adverse effects of MBIs are likely under-measured and under-reported in the literature relative to pharmacological adverse effects, which are subject to more systematic pharmacovigilance, so the frequent implicit assumption that psychological interventions carry negligible risk should not be taken for granted; and the evidence base in children and adolescents is notably weaker and more mixed than in adults (see below), such that the conclusions of this essay should not be extended to school-based implementation without separate consideration.

Two further points warrant explicit acknowledgment. First, the per-instructor training cost of approximately R\$15,000 is based on the figure reported in Demarzo, Cebolla, and Garcia-Campayo (2015) ^[7]; this figure has not been formally adjusted for inflation, currency variation, or changes in training-delivery costs since that publication, and should be treated as an approximation pending updated costing. Second, a relatively high proportion of the evidence cited in support of MBHP derives from studies conducted, coordinated, or co-authored by the corresponding author, who is the developer and coordinator of the MBHP program in Brazil. While this reflects the corresponding author's central role in the development and evaluation of MBHP nationally, it is acknowledged here transparently as a potential source of bias, and independent replication of these findings is encouraged.

Evidence-based Approach

Beyond financial aspects, evidence shows that mindfulness produces tangible benefits for mental health and well-being in adults, though the strength of this evidence varies by population and comparator. An individual participant data meta-analysis ^[13] demonstrated that mindfulness-based programs significantly reduce psychological distress (anxiety and depression) in adults (SMD = −0.32). A large randomized clinical trial found that practitioner-supported MBCT self-help was superior to practitioner-supported CBT self-help for reducing depressive symptoms in adults with mild-to-moderate depression, and was cost-effective compared with the CBT-based standard of care ^[11]. During the COVID-19 pandemic, a systematic review and meta-analysis ^[14] found robust effects of mindfulness on reducing depressive symptoms (SMD ~ −1.14). More recently, another systematic review ^[15] highlighted the neurocognitive and emotional regulation benefits of MBCT.

This evidence should be weighed against established alternatives. Cognitive-behavioral therapy (CBT) and other psychotherapies — including dialectical behavior therapy (DBT), emotion-focused therapy (EFT), and acceptance and commitment therapy (ACT, which incorporates but is not limited to

mindfulness) — have strong independent evidence bases and their own cost-effectiveness literature; for example, a randomized trial comparing cognitive therapy, rational emotive behavioral therapy, and fluoxetine found each to be cost-effective relative to the others under different assumptions, with no single approach dominating ^[16].

Psychodynamic and psychoanalytic therapies, integrative community care, and combined medication–psychotherapy approaches are also highly relevant within the Brazilian context. Direct within-country comparative data are beginning to emerge: a Brazilian randomized trial comparing online trial-based cognitive therapy, MBHP, and positive psychotherapy for PTSD during COVID-19 found comparable efficacy across the three approaches ^[17], suggesting MBHP performs similarly to established alternatives rather than being uniquely superior — a more modest and more defensible claim than the original comparison to medication alone implied.

This essay's cost argument therefore establishes that MBI training is comparatively inexpensive relative to medication specifically, not that it is the most cost-effective option among all psychosocial alternatives.

Evidence in children and adolescents is considerably more mixed than in adults. The My Resilience in Adolescence (MYRIAD) trial, the largest cluster-randomized trial of universal school-based mindfulness training to date (over 8,000 adolescents), found no significant effects on depression risk, anxiety, well-being, or social-emotional functioning relative to usual school provision, despite improvements in some secondary outcomes such as teacher well-being and school climate ^[18].

This contrasts with generally more favorable findings in adult clinical and community samples and indicates that the cost-effectiveness case made in this essay should not be assumed to extend to universal youth programs without separate, population-specific evidence. A Brazilian mixed-methods pilot comparing two school-based mindfulness curricula in children aged 9–11 similarly found a mixed pattern of quantitative and qualitative outcomes rather than uniform benefit ^[19], reinforcing that local piloting in pediatric populations, rather than extrapolation from adult SUS data, is warranted before any child-focused component of a national program is costed.

There is also an implicit assumption, common in the literature, that psychological interventions such as MBIs carry negligible adverse effects relative to medication. This assumption reflects a measurement asymmetry — pharmacovigilance systems systematically capture medication adverse effects, whereas psychological intervention trials rarely assess or report adverse or unwanted effects with comparable rigor — rather than established evidence that MBIs are safer. Patient preference is also relevant and under-addressed: acceptability of a weekly group-based practice may differ by gender, culture, and condition relative to a private, quickly self-administered medication, and this should be assessed empirically in the Brazilian context rather than assumed.

In the Brazilian context, the MBHP program — culturally adapted and implemented in public and community settings — has demonstrated positive outcomes in adult populations. A multicenter randomized controlled trial with Brazilian police officers (POLICE Study) showed significant improvements in quality of life and reductions in depression and anxiety, maintained at a six-month follow-up ^[20]. In primary care in Rio de Janeiro's vulnerable communities, MBHP groups improved depression, anxiety, and quality of life

indicators in SUS patients [21]. Beyond mental health outcomes narrowly defined, a Brazilian trial of the MBHP protocol in primary care users with chronic conditions found improvements in eating behavior, self-care, and lifestyle habits [22], illustrating the kind of transversal, chronic-disease-relevant benefit that distinguishes mindfulness training from condition-specific pharmacological treatment. In older adults, a randomized trial found MBHP beneficial for reducing stress and anxiety and improving sleep quality and intrinsic religiosity, while quality-of-life measures favored an active control [23].

Relevant to the workforce question raised above, MBHP has also shown benefits for the health professionals who might staff such a program: a study in Latin American healthcare workers found improvements in mindfulness, psychological capital, and compassion fatigue following participation [24], suggesting instructor training could plausibly yield secondary benefits for provider well-being and retention, partially offsetting the maintenance costs estimated above. Among Brazilian medical students, a pilot clinical trial showed reductions in depressive and anxiety symptoms and increases in mindfulness after MBHP participation [25]. Collectively, these results provide local evidence, in adult populations, that MBHP can deliver real-world mental health gains within SUS-like contexts at a modest training cost — though, as noted above, delivery and maintenance costs beyond training should now also be factored into any implementation decision.

Implementation Plan

A progressive implementation plan, piloted and formally evaluated before nationwide scale-up, would make this scenario more realistic and feasible within the SUS. Similar to other large-scale health programs, such as the Family Health Strategy and the “Mais Médicos” Program, expansion of mindfulness instructor training could follow a phased approach aligned with national priorities and institutional capacity [8].

In the first three years, approximately 1,000 instructors could be trained at centers of excellence, such as federal universities and research institutes, which already have relevant expertise and infrastructure [7]. This phase should include formal costing of delivery under real-world conditions (Scenario A vs. B above) and an evaluation of instructor retention and refresher-training needs, addressing the assumptions identified above, in line with the UK’s experience of anchoring MBCT implementation in academic centers [26]. A stepped-wedge cluster-randomized protocol for implementing MBCT for mild depression within Brazilian primary care is already underway and could inform this phase directly, providing real-world data on implementation costs and effectiveness rather than the illustrative estimates used here [27].

In the following three years, the network could expand to about 4,000 instructors, distributed according to population density and regional health needs [6]. A stepped-care framework could be adopted, offering low-intensity interventions widely (e.g., brief mindfulness practices in primary care) while reserving high-intensity interventions (e.g., MBCT for recurrent depression) for clinical indications, optimizing resources.

By the end of ten years, the complete network of 8,400 to 11,200 instructors would be consolidated within the SUS, aligned with the National Policy on Integrative and Complementary Practices in Health (PNPIC), revised in 2015 [28],

with instructors integrated into multidisciplinary teams similar to other recognized professionals in Family Health Support Centers.

Policy Context

Brazil already has an institutional framework that could support such an initiative: the National Policy on Integrative and Complementary Practices in Health (PNPIC), established in 2006 and revised in its second edition in 2015 [28]. The PNPIC already recognizes practices such as meditation and other mind–body approaches, providing legal and programmatic support for the inclusion of mindfulness-based interventions within the SUS.

The Example of the United Kingdom

The experience of the United Kingdom shows how mindfulness can be implemented within universal health systems. Since 2004, the National Institute for Health and Care Excellence (NICE) has recommended Mindfulness-Based Cognitive Therapy (MBCT) for the prevention of relapse in recurrent depression [29] (updated in 2009 and 2015). The UK invested in instructor training inside the system, establishing national standards, university-based training centers, and continuing education for healthcare professionals [26]. Even so, studies show that access remains unequal, with barriers related to logistics, infrastructure, and the availability of trained professionals — and, as the MYRIAD trial illustrates, extension of this model to universal school-based delivery has not shown the same benefits observed in adult clinical and community populations.

Compared with Brazil, the context is in some respects favorable: the SUS has strong experience with large-scale training programs (e.g., Family Health Strategy, “Mais Médicos”) and extensive primary care coverage. This means that, with political decision-making and appropriate piloting, a progressive, evidence-based training plan for mindfulness instructors could plausibly be adapted to Brazil’s reality, informed by both the successes and the limitations of the UK experience.

Conclusion

The comparative evidence reviewed here — including delivery, maintenance, and workforce costs alongside training — suggests that training and operating a national network of mindfulness instructors would represent a comparatively modest investment relative to recurrent psychiatric medication expenditure and the overall SUS budget, even under conservative combined assumptions (~R\$165–221 million/year vs. ~R\$500 million/year for medications and >R\$230 billion for the total SUS budget). Unlike medication, training builds human resource capacity that remains within the health system; operating that capacity (delivery and maintenance) is not free, however, and the evidence supporting MBI effectiveness is strongest in adults and weaker in children and adolescents.

We do not conclude that cost is the only or even the primary barrier: political will, organizational priority, patient acceptability, and rigorous local piloting all matter, and the assumptions underlying these estimates (Assumptions and Limitations) should be tested empirically before large-scale commitment. We do conclude that the frequently repeated claim that training is prohibitively expensive does not survive scrutiny, even after fully accounting for delivery,

maintenance, and workforce costs — a more complete and more defensible basis for piloting a national mindfulness-instructor program within the SUS than a training-only cost comparison would provide.

Statements and Declarations

Funding

No specific funding was received for this work.

Potential Competing Interests

The author, M.D., is the developer/coordinator of the Mindfulness-Based Health Promotion (MBHP) program referenced in this study and is affiliated with institutions that provide training for mindfulness instructors.

Ethics

Ethical approval was not required for this study as it involves the modeling of public data and secondary analysis of existing literature and does not involve primary data collection from human participants.

Data Availability

All data generated or analyzed during this study are included in the manuscript. The benchmarks and budget figures are derived from publicly available government documents and the cited literature.

Author Contributions

M.D. is the sole author and is responsible for conceptualization, drafting, and final approval of the manuscript.

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