

Manuscript Details

Manuscript number	COPSYC_2018_211_R1
Title	Running too far ahead? Towards a broader understanding of mindfulness in organisations
Short title	Running too far ahead?
Article type	Review article

Abstract

Current workplace mindfulness research and interventions assume that teaching mindfulness will have beneficial effects for people and organizations. While research shows that mindfulness trainings may increase resilience of working adults, assuming that mindfulness will have independent effects on outcomes at different levels of an organization is not well grounded. We assert that mindfulness training would, however, be beneficial for organizations when tailored to that context and shaped by an understanding of organizational theory and practice. We also envisage mindfulness as a beneficial property of teams, organizations and the individuals who constitute them. To close the evidence gap we propose building multi-level models of mindfulness in organizations, broadening training programs, and developing a novel competency framework for teachers in this context.

Keywords mindfulness; mindfulness research; team mindfulness; organizations; leadership; workplace; teacher training

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Submission Files Included in this PDF

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20181007 Authors Answers on the Reviewers Comments v3.docx [Response to Reviewers]

20181007 COP-paper Running too far ahead reviewed version v1.docx [Manuscript File]

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Title: Running too far ahead? The evidence gap on mindfulness training in organizations

Journal: Current Opinion in Psychology

Dear Mr. Koole,

Thank you for submitting your manuscript to the Current Opinion in Psychology special issue dedicated to mindfulness. We have received comments from reviewers on your manuscript. Your paper should become acceptable for publication pending a revision of the article in light of the appended reviewer comments.

Overall, this is a great contribution to the special issue as well as a 'where are we now' perspective on mindfulness in organizations that the entire field can reflect upon. I particularly appreciated the candid and direct caution with respect to effects of mindfulness on organizations to-date. It is precisely this type of candor and perspective that the special issue and field need. Below you will find two reviews with comments to guide a revision of the manuscript. I hope that these are helpful.

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Prof. Amit Bernstein, Ph.D.
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Comments from the editors and reviewers:

REVIEWER 1

Review: Running too far ahead?

This is a well-written review and discussion of the current developments in the area of mindfulness in organisations. The review points out that current evidence is preliminary and offers important pointers for future developments. I found it particularly helpful to see a detailed discussion of potential interaction between mindfulness practice and organisational factors leading to the call for an enhanced framework for this area of research.

There are only minor suggestions that occurred to me while reading. The main one of these relates to the fact that the paper highlights an evidence gap but provides relatively little detail on the current state of the evidence other than a summary judgment. It is stated that “intervention studies are scarce”, which is important information. I wonder, however, whether it would be possible, within the space constraints, to at least provide some information with regard to number of studies published to date and their main characteristics, i.e. how many of them had a follow-up and were properly controlled.

Authors: We've updated the short review and added information about the quality of the intervention studies (only 20% received a high-quality rating, i.e. were properly controlled). We've focused on three main workplace specific outcomes that have previously been investigated in mindfulness studies in the workplace: leadership, performance and prosocial behaviour. We've improved the structure of this paragraph to show that the scarcity of intervention studies related specifically to the leadership outcomes (There is only ONE intervention study published to date that we are aware of, which we are citing).

The revised paragraphs now read as follows:

Workplace mindfulness research has been largely influenced by MBSR/MBCT modelling – the general approach being that teaching people mindfulness in organizations will have beneficial effects for them and their organizations [8]. There is now consistent evidence that mindfulness-based interventions are effective in reducing stress in working adults [7,9] as well as symptoms of depression and addiction in clinical populations [10,11].

To date, 80% of mindfulness intervention studies in workplaces have focused on stress and resilience as their primary outcomes variables [12] but the overall study quality remains low [7].

Studies about the impact of mindfulness training on workplace-specific outcomes such as leadership, prosocial behaviour at work and performance [8] have produced at best preliminary evidence of positive outcomes. Studies investigating mindfulness and leadership, for example, are predominantly correlational [13–15] and found that mindful leadership was associated with humility and authenticity [13], follower wellbeing and citizenship [14] and good quality of leader-follower interactions [15]. But intervention studies investigating the effect of mindfulness on key aspects of leadership are scarce [16]. Mindfulness may be associated with increases in prosocial behaviour at work [17,18], demonstrated by greater empathy and compassion [19,20] and higher interaction quality, but Gebauer and colleagues [21] challenge the notion that MT is related to greater other-orientation by showing that instead of muting the ego it enhanced self-centrality. As a final example there have been inconsistent outcomes regarding the association of mindfulness with performance indicators. Some studies show that mindfulness may be associated with improved individual [5,22–24] and team performance [25,26]. Other studies report negative or no effects of state mindfulness or MT on performance indicators [27,28].

Other minor points such as typos are listed below:

Journal guidelines require highlights to be no longer than 85 characters each in order to provide a very condensed reflection of the paper. Could you please shorten the current version?

→ [W've changed this](#)

Introduction:

“mindfulness-based” instead of ‘mindfulness based’. Could you please change this usage throughout.

[Yes, we've changed this](#)

Modelling mindfulness in the context of organisations:

“We must therefore develop theories...” or “a theory”, instead of “We must therefore develop theory that offers...”

[Updated](#)

“... compassionate leadership can create...” instead of “specifically can create...”

[Updated](#)

The training practice: broader programs and teacher qualifications:

Updated

Delete “are” in the sentence beginning with “Teacher qualification is a core factor...”

Updated

Conclusions:

In the second sentence, delete “First” as there is no “Second” later on.

Updated, conclusions rewritten.

“Only in this way can mindfulness in organisations live up to its promise...” instead of “Only in this way mindfulness in organisations...”

Updated

References:

“This study showed that MT (and Yoga) increased self-enhancement mediated by self-centrality” instead of “meditated”

Updated

REVIEWER 2

Review of “Running too far ahead? The evidence gap on mindfulness training in organizations” [#COPSYC_2018_211]

Major Issues

1. Authors may want to clarify the following argument and text: “Our current understanding of workplace mindfulness from the individual level perspective is

insufficient as it does not take into account the organizational context. We must therefore develop theory that offers explanations based on interactions – moderation and mediation effects – between mindfulness and significant workplace factors such as structures and processes, visions and objectives, climates and cultures, problems and challenges.” As best I understood, authors may address/admix two issues in these sentences. First, is the issue of focusing on individual change rather than organizational outcomes that cut across individuals. The second issue involves study of contextual factors that may moderate MT effects and mediating factors or explanatory mechanisms through which MTs may have organizational effects. Can authors please revise/clarify this section of the text?

Authors: The main issue is in our understanding that the research into the effectiveness of training mindfulness in individuals is too simplified when disregarding contextual factors that are known to affect wellbeing and performance. We tried to clarify that in the text. The second suggestion is our proposition to expand mindfulness to team and organizational levels, which we clarified in the second paragraph.

The paragraphs now read:

A first issue that must be addressed includes what is meant by individual mindfulness in organizations and how (or if) this differs from non-work settings [22]. As Lyddy and Good [32] discuss for example in their inductive model, mindfulness practitioners may develop “being while doing” at work, thus applying mindfulness skills to their respective work environments.

Then, we can conceive of mindfulness practices and skills among multiple team members affecting team and organizational processes and outcomes. These might include inter alia reduced conflict, improved interpersonal relationship, greater awareness of errors or problems in work processes, and improved team and organizational productivity – for which there is preliminary evidence [8].

This perspective should then also take into account how organizational factors might moderate the effects of mindfulness practices on team and organizational outcomes. Thus, the combined effects on the outcomes for teams or organizations of multiple members practising mindfulness will be moderated by the extent to which there is a clear, shared purpose, a good value fit between members and the organization overall and a supportive, compassionate and authentic leadership.

2. Authors sometimes refer to mindfulness training and practice among individuals *within* an organizations; and other times they refer to a variety of forms of awareness and care involved in a more ‘mindful workplace environment’. It is a bit confusing though as they inter-changeably refer to both of these forms of practices or states as *mindfulness* per se. If it were up to me, I would limit the use of the term *mindfulness* to the former and would conceptualize and label the latter with organizational practices that are consistent with practice and tenets of mindfulness or consequences of such individual practices. For example, authors refer to “mindfulness practices to increase awareness of team and organizational processes”. It is not clear whether team and organization processes are subjective experience in the present moment. If not, then they may be important processes, and could

potentially be influenced by a person/people being more mindful him/herself, but how could such organizational processes be the objects, per se, of a mindfulness practice and mindful awareness? This is a quite fundamental issue that could be clarified through this manuscript. This would be very helpful to this domain of mindfulness research and implementation.

Authors: Interesting point, thanks for helping us clarify this theory. Team mindfulness is not necessarily an aggregated individual level variable but rather a property of teams as suggested by Yu and Zellmer-Bruhn, 2018. Tried to clarify in more detail what is meant by the various definitions and use more distinct words for each concept as you suggest. In the revised paragraph we have done so:

To broaden our understanding we also propose the conceptualization of mindfulness as a supra-individual level phenomenon. Mindfulness can emerge as a team-level variable in team units based on team experiences [26,33]. A provisional definition of team mindfulness would describe it as collectively paying attention to the team experiences and their underlying objectives, tasks, roles and structures, in a periodically consistent and non-judgmental way. Extensive research on team reflexivity has demonstrated that through a sustained collective awareness of purpose, performance, processes, climate and problems, teams are better able to ensure effective team functioning [33–37]. Just as one returns to present moment awareness in the practice of individual mindfulness, so mindful teams will repeatedly return their awareness or attention to purpose, performance, processes, climate and problems. This may be mediated by processes such as changes in present moment experiencing and by the adoption of non-judgmental attitudes thus allowing members to become more sensitive to the dynamics of their teams and more capable of adapting team structures and processes [26].

Related to the above issue are statements such as, “Our vision is that mindfulness must be seen not only as an individual property but also as a property of teams and organizations.” I understand, I think, what authors intend. If the authors believe that this is important and they stand behind it, then it is important that they clarify this conceptually early and throughout the manuscript. i.e., beyond a mindfulness as a metaphor, what and how precisely is an organization per se mindful?

Authors: we think we clarified this in the rewritten paragraph on Putting mindfulness in the context of organizations.

3. Overall, the various ideas presented in the “Modelling mindfulness in the context of organizations” section are clear and reasonable. However, the section currently is a bit tough to follow in the sense that it presents a variety of ideas that are not linearly related. It may be useful to re-structure and revise this section so that the various ideas are presented in a way that is more segmented and each paragraph or idea is specified.

Authors: thanks for your comments. We thinks the current paragraph now has a more logical structure of reasoning.

4. I had a similar sort of read of “The training practice: broader programs and teacher qualifications” section. That is, this section begins by relating to mindfulness training related to interactions within a team or organization. But then transitions directly to

discuss “Teacher qualification is a core factor in the success of delivering effective mindfulness trainings in organizations are.” Could the authors clarify/revise this portion of the paper?

Authors: yes we have done so and the paragraph now reads:

Currently, mindfulness training in organizations focuses on teaching mindfulness to individuals (both employees and leaders). Given that our conceptualizations of mindfulness in organizations are credible, we expect that in addition to developing mindfulness in individuals the need for training programs focusing on mindfulness of team and organizational processes will grow. This means including interpersonal habits, both of individuals and teams and the related group dynamics, in the content of the training programs. Although such a shift might happen unconsciously (e.g. one study showed increased awareness of workplace stressors following MBSR training [44]) leaders and employees might be guided in a process so as to become curious about improving team and organizational effectiveness as part of the training [33].

Teacher qualification is a core factor in the success of delivering effective mindfulness trainings in organizations. In developing such qualifications the current focus is on translating the well-formulated MBSR-based standards into the workplace context [45]. For teaching mindfulness in organizations qualifications need to be broadened to having a sound understanding of the possible links between mindfulness practice and team and organizational dynamics.

This calls for the development of a competency framework for teachers of mindfulness in organizations which encompasses both mindfulness teaching skills and the knowledge and skills to apply mindfulness in teams and organizations. Thus, if the goal is to improve team effectiveness in an organization, the combined qualifications of an experienced mindfulness trainer and that of a team leader or coach will be needed. If the goal is stress reduction, a mindfulness intervention may be preceded by an investigation of the factors causing stress in that specific work environment (such as workload, bullying, harassment, discrimination, role ambiguity) and an evaluation of whether mindfulness interventions are sufficient without other organizationally contextualised interventions.

Supporting the development of team and organizational mindfulness presupposes having sufficient knowledge of research into team and organizational functioning and the effective training practices that are based upon that. Then teachers will be equipped to do more than simply teach individual mindfulness practices in organizations. They can couple this with interventions which increase collective awareness of team/organizational purpose, processes, climate, problems etc. to achieve desired individual, team and organizational outcomes.

4. Could authors clarify further what they mean by the following idea/statement: “Based upon our argument above of placing mindfulness in the organizational context, we assert that a broader understanding of the link between a mindfulness teacher’s competencies and the desired outcomes (on individuals, team or organizations) will be key.” Could this be developed a bit, even briefly?

5. If possible, authors may wish to make each paragraph in the “Conclusions” section more narrow and specified. Currently, some ideas seem to repeat themselves between different concluding paragraphs (e.g., research quality). Such a revision could help readers walk away with a more clear 1-2-3 as to what we know or what we need with respect to study and implementation of mindfulness in organizations.

Authors: both points 4 and 5 have been taken into account in the rewritten paragraph on training practice and teacher qualifications.

8. It is important that authors clarify – early in the paper – what sorts of organizations they are and are not referring to in the paper (e.g., schools).

Minor Issues

1. Please be sure that the highlights text is in line with journal formatting requirements

Done so

2. Please consider revising the following highlight text – it is not fully clear: “Research into mindfulness in organizations needs a multilevel model that offers explanations based on moderation and mediation effects between mindfulness and other significant organizational factors.”

Done so

3. Can authors clarify what they mean by this heading or revise the heading? “Modelling mindfulness in the context of organizations”

Revised to Mindfulness in the context of organizations. The modelling referred to the development of a framework but we actually propose a more comprehensive view of mindfulness in organizations.

4. Typo: “Teacher qualification is a core factor in the success of delivering effective mindfulness trainings in organizations are.”

Updated

Running too far ahead? Towards a broader understanding of mindfulness in organisations

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Declaration of interest

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Wibo Koole is Director of the Centrum voor Mindfulness, a not-for-profit company that offers mindfulness programs for organizations.

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Michael West: none.

Abstract

Current workplace mindfulness research and interventions assume that teaching mindfulness will have beneficial effects for people and organizations. While research shows that mindfulness trainings may increase resilience of working adults, assuming that mindfulness will have independent effects on outcomes at different levels of an organization is not well grounded. We assert that mindfulness training would, however, be beneficial for organizations when tailored to that context and shaped by an understanding of organizational theory and practice. We also envisage mindfulness as a beneficial property of teams, organizations and the individuals who constitute them. To close the evidence gap we propose building multi-level models of mindfulness in organizations, broadening training programs, and developing a novel competency framework for teachers in this context.

Highlights

- Mindfulness improves resilience in working adults, but evidence for other work context outcomes such as performance is inconsistent.
- Mindfulness interventions which also focus on team and organizational processes may be more effective than mindfulness alone
- Research should be guided by multilevel models that offer explanations based on interactions between mindfulness and key organizational factors.
- To ensure high quality training for mindfulness in organizations we propose the development of a competency framework for trainers
- Mindful and compassionate leadership should facilitate team and organizational mindfulness.

Research: the evidence gap

A variety of mindfulness-based trainings (MTs) have been developed for workplaces and for specific target audiences in these - such as leaders. These trainings are either adaptations from MBSR programmes [1,2], or programmes based on different theoretical models such as emotional intelligence [3] or Buddhist philosophy [4–6]. Unlike traditional MTs, workplace MTs vary greatly in length (1 day to 16 weeks) and modes of delivery (apps, webinar, live training) to meet the demands and budgets of organizations [7]. In addition to formal mindfulness practices, a number of informal practices have been developed that foster mindfulness at work and of work – mindful communication, mindful emailing, mindfulness of transitions between tasks and moments of silence [1,2,5]. Understandably, practitioners and organizations are interested in research about the potential for MTs to enable employees and leaders to thrive and be effective in the work environment.

Workplace mindfulness research has been largely influenced by MBSR/MBCT modelling – the general approach being that teaching people mindfulness in organizations will have beneficial effects for them and their organizations [8]. There is now consistent evidence that mindfulness-based interventions are effective in reducing stress in working adults [7,9] as well as symptoms of depression and addiction in clinical populations [10,11]. To date, 80% of mindfulness intervention studies in workplaces have focused on stress and resilience as their primary outcomes variables [12] but the overall study quality remains low [7].

Studies about the impact of mindfulness training on workplace-specific outcomes such as leadership, prosocial behaviour at work and performance [8] have produced at best

preliminary evidence of positive outcomes. Studies investigating mindfulness and leadership, for example, are predominantly correlational [13–15] and found that mindful leadership was associated with humility and authenticity [13], follower wellbeing and citizenship [14] and good quality of leader-follower interactions [15]. But intervention studies investigating the effect of mindfulness on key aspects of leadership are scarce [16]. Mindfulness may be associated with increases in prosocial behaviour at work [17,18], demonstrated by greater empathy and compassion [19,20] and higher interaction quality, but Gebauer and colleagues [21] challenge the notion that MT is related to greater other-orientation by showing that instead of muting the ego it enhanced self-centrality. As a final example there have been inconsistent outcomes regarding the association of mindfulness with performance indicators. Some studies show that mindfulness may be associated with improved individual [5,22–24] and team performance [25,26]. Other studies report negative or no effects of state mindfulness or MT on performance indicators [27,28].

Such contradictory outcomes may partly be explained by the overall weak study quality [7,17]. Perhaps more salient is the timid and theoretically weak approach to conceptualizing, researching and teaching mindfulness in organizations. The gap between evidence and training practice is reflected in a debate [29] about whether it is ethical to offer mindfulness training as a panacea for the problems of modern workplaces such as excessive workloads, bullying, harassment and punitive supervision.

Putting mindfulness in the context of organizations

Why should mindfulness practice produce significant changes in workplace experience [30], or lead to better organizational outcomes? It seems unlikely that simply encouraging people to practice mindfulness will change the damaging effects of high performance pressure and dysfunctional leadership. Similarly, can we be sure that introducing mindfulness to working environments characterised by bullying or blaming will make a difference to that culture [31]? For a better understanding of mindfulness in the context of organizations we must develop theories that offer explanations based on interactions between mindfulness and significant workplace factors. Furthermore, it will be necessary to expand our current understanding of mindfulness as an individual-level variable to include mindfulness as a team- and organization-level variable.

A first issue that must be addressed includes what is meant by individual mindfulness in organizations and how (or if) this differs from non-work settings [22]. As Lyddy and Good [32] discuss for example in their inductive model, mindfulness practitioners may develop “being while doing” at work, thus applying mindfulness skills to their respective work environments.

Then, we can conceive of mindfulness practices and skills among multiple team members affecting team and organizational processes and outcomes. These might include inter alia reduced conflict, improved interpersonal relationship, greater awareness of errors or problems in work processes, and improved team and organizational productivity – for which there is preliminary evidence [8].

This perspective should then also take into account how organizational factors might moderate the effects of mindfulness practices on team and organizational outcomes. Thus, the combined effects on the outcomes for teams or organizations of multiple members practising mindfulness will be moderated by the extent to which there is a clear, shared purpose, a good value fit between members and the organization overall and a supportive, compassionate and authentic leadership.

To broaden our understanding we also propose the conceptualization of mindfulness as a supra-individual level phenomenon. Mindfulness can emerge as a team-level variable in team units based on team experiences [26,33]. A provisional definition of team mindfulness would describe it as *collectively paying attention to the team experiences and their underlying objectives, tasks, roles and structures, in a periodically consistent and non-judgmental way*. Extensive research on team reflexivity has demonstrated that through a sustained collective awareness of purpose, performance, processes, climate and problems, teams are better able to ensure effective team functioning [33–37]. Just as one returns to present moment awareness in the practice of individual mindfulness, so mindful teams will repeatedly return their awareness or attention to purpose, performance, processes, climate and problems. This may be mediated by processes such as changes in present moment experiencing and by the adoption of non-judgmental attitudes thus allowing members to become more sensitive to the dynamics of their teams and more capable of adapting team structures and processes [26].

Team mindfulness is thus distinct from individual mindfulness but may be enhanced by individual mindfulness practice. For example, where there is a high level of individual level mindfulness, it would be possible, through training, to encourage team members to develop and sustain awareness of key team elements. Such sustained attention on these core components of team (and organizational) functioning will increase the likelihood of team and organizational effectiveness. This calls for a clear conceptualization of the interaction between collective individual mindfulness and team (or organizational) mindfulness which would reflect the role of organizational purpose, performance and processes (leadership, decision-making, conflict management, people management) as well as culture, climate and problems (excessive workload, staff shortages, discrimination, conflict) [38]. Thus interventions that focus both on individual mindfulness and on increasing team member awareness of core team (or organizational) characteristics will have more powerful effects than their separate contributions.

Finally, theory might also focus on how mindful and compassionate leadership can create the conditions for effective team working and innovation [39]. There is evidence that compassionate leadership creates conditions for altruism and intrinsic motivation, for risk taking, for speaking about errors, concerns and problems, for developing improved ways of doing things, and for creating a climate of optimism, efficacy and cohesion in teams [40].

All in all, we propose the development of a multi-level model of mindfulness in organizations [41]. This leads to a vision of mindfulness also as a property of teams and organizations as a whole, which differs from Weick et al.'s [42] depiction of organizational mindfulness as (only) a set of practices [43].

The training practice: broader programs and teacher qualifications

Currently, mindfulness training in organizations focuses on teaching mindfulness to individuals (both employees and leaders). Given that our conceptualizations of mindfulness in organizations are credible, we expect that in addition to developing mindfulness *in* individuals the need for training programs focusing on mindfulness *of* team and organizational processes will grow. This means including interpersonal habits, both of individuals and teams and the related group dynamics, in the content of the training programs. Although such a shift might happen unconsciously (e.g. one study showed increased awareness of workplace stressors following MBSR training [44]) leaders and

employees might be guided in a process so as to become curious about improving team and organizational effectiveness as part of the training [33].

Teacher qualification is a core factor in the success of delivering effective mindfulness trainings in organizations. In developing such qualifications the current focus is on translating the well-formulated MBSR-based standards into the workplace context [45]. For teaching mindfulness in organizations qualifications need to be broadened to having a sound understanding of the possible links between mindfulness practice and team and organizational dynamics.

This calls for the development of a competency framework for teachers of mindfulness in organizations which encompasses both mindfulness teaching skills and the knowledge and skills to apply mindfulness in teams and organizations. Thus, if the goal is to improve team effectiveness in an organization, the combined qualifications of an experienced mindfulness trainer and that of a team leader or coach will be needed. If the goal is stress reduction, a mindfulness intervention may be preceded by an investigation of the factors causing stress in that specific work environment (such as workload, bullying, harassment, discrimination, role ambiguity) and an evaluation of whether mindfulness interventions are sufficient without other organizationally contextualised interventions.

Supporting the development of team and organizational mindfulness presupposes having sufficient knowledge of research into team and organizational functioning and the effective training practices that are based upon that. Then teachers will be equipped to do more than simply teach individual mindfulness practices in organizations. They can couple this with interventions which increase collective awareness of team/organizational purpose, processes, climate, problems etc. to achieve desired individual, team and organizational outcomes.

Conclusions

Mindfulness in organizations is not only an individual property but also a property of teams and the organization itself. For example, based on their shared understanding of team effectiveness, team members may apply mindfulness to team processes thereby improving team performance and individual well-being. Compassionate and mindful leadership may be particularly potent and salient in guiding this, given the influence of leaders in teams.

Future research should focus on gaining a deeper understanding of the potential and limits of training individuals in mindfulness in a workplace context. To start, qualitative and correlational research might help us to ground new theories and models. Intervention studies could then include active control conditions such as team effectiveness coaching and compare the differential impact of coaching vs mindfulness in a team setting along with a combination of both. In general, more high-quality studies employing longitudinal and multilevel designs that account for the nested structure of organizations (individuals, teams, departments, organizations) will enrich our understanding. Furthermore, potential mediators and moderators on each level of the organization (e.g., supervisory support, role clarity, clarity of team purpose and objectives, organizational culture) should be taken into consideration [26,46]. This also implies recruiting whole teams or organizations rather than a self-selected sample of working people interested in practising mindfulness.

Mindfulness training organizations may need to broaden their approach and to develop programs that integrate mindfulness at team and organizational level. Research into team and organizational effectiveness must be integrated into our thinking about how to apply mindfulness in organizations. Trainings with individuals, team and whole organizations

should apply a competency framework rooted in a comprehensive understanding and embodiment of mindfulness in an organizational context.

Given the evidence gap and the need to broaden our understanding of mindfulness in organizations the biggest contribution perhaps of trainers and researchers to mindfulness in organizations could be the humble acknowledgement that we only know so much. And that offering training individuals in mindfulness as a panacea for modern workplace problems will not do it. Only in this way can mindfulness in organizations live up to its promise and avoid becoming an empty signifier that can be used to sell anything [47].

Acknowledgements

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

- [1] M. Chaskalson, *The mindful workplace: Developing resilient individuals and resonant organizations with MBSR*, Wiley-Blackwell, Chichester, West Sussex ; Malden, MA, 2011.
- [2] W. Koole, *Mindful leadership: effective tools to help you focus and succeed*, Warden Press, Amsterdam, 2014.
- [3] C.-M. Tan, *Search inside yourself: The unexpected path to achieving success, happiness (and world peace)*, HarperOne, New York, 2012.
- [4] E. Shonin, W. Van Gordon, T.J. Dunn, N.N. Singh, M.D. Griffiths, *Meditation Awareness Training (MAT) for Work-related Wellbeing and Job Performance: A Randomised Controlled Trial*, *Int. J. Ment. Health Addict.* 12 (2014) 806–823. doi:10.1007/s11469-014-9513-2.
- [5] W. Kersemaekers, S. Rupperecht, M. Wittmann, C. Tamdjidi, P. Falke, R. Donders, A. Speckens, N. Kohls, *A workplace mindfulness intervention may be associated with improved psychological well-being and productivity. A preliminary field study in a company setting*, *Front. Psychol.* 9 (2018). doi:10.3389/fpsyg.2018.00195.
- [6] R. Hougaard, G. Coutts, *One second ahead: enhance your performance at work with mindfulness*, Palgrave Macmillan, Houndmills, Basingstoke, Hampshire : New York, NY, 2016.
- [7]* T. Lomas, J.C. Medina, I. Ivztan, S. Rupperecht, R. Hart, F.J. Eiroa-Orosa, *The impact of mindfulness on well-being and performance in the workplace: an inclusive systematic review of the empirical literature*, *Eur. J. Work Organ. Psychol.* (2017) 1–22. doi:10.1080/1359432X.2017.1308924.

This systematic review of mindfulness studies set in workplaces showed the great heterogeneity in study quality, samples, training types and outcome variables.

- [8]* D.J. Good, C.J. Lyddy, T.M. Glomb, J.E. Bono, K.W. Brown, M.K. Duffy, R.A. Baer, J.A. Brewer, S.W. Lazar, *Contemplating mindfulness at work: An integrative review*, *J. Manag.* 42 (2016) 114–142. doi:10.1177/0149206315617003.

This review summarized the assumed potential of mindfulness at work by drawing from evidence of mindfulness research.

- [9] A. Chiesa, A. Serretti, *Mindfulness-Based Stress Reduction for stress management in healthy people: A review and meta-analysis*, *J. Altern. Complement. Med.* 15 (2009) 593–600. doi:10.1089/acm.2008.0495.

- [10] S.B. Goldberg, R.P. Tucker, P.A. Greene, R.J. Davidson, B.E. Wampold, D.J. Kearney, T.L. Simpson, Mindfulness-based interventions for psychiatric disorders: A systematic review and meta-analysis, *Clin. Psychol. Rev.* 59 (2018) 52–60. doi:10.1016/j.cpr.2017.10.011.
- [11] W. Kuyken, F.C. Warren, R.S. Taylor, B. Whalley, C. Crane, G. Bondolfi, R. Hayes, M. Huijbers, H. Ma, S. Schweizer, Z. Segal, A. Speckens, J.D. Teasdale, K. Van Heeringen, M. Williams, S. Byford, R. Byng, T. Dalgleish, Efficacy of Mindfulness-Based Cognitive Therapy in Prevention of Depressive Relapse: An Individual Patient Data Meta-analysis From Randomized Trials, *JAMA Psychiatry*. (2016). doi:10.1001/jamapsychiatry.2016.0076.
- [12] L.T. Eby, T.D. Allen, K.M. Conley, R.L. Williamson, T.G. Henderson, V.S. Mancini, Mindfulness-based training interventions for employees: A qualitative review of the literature, *Hum. Resour. Manag. Rev.* (2017) 1–23. doi:10.1016/j.hrmr.2017.03.004.
- [13] A. Pircher Verdorfer, Examining mindfulness and its relations to humility, motivation to lead, and actual servant leadership behaviors, *Mindfulness*. 7 (2016) 950–961. doi:10.1007/s12671-016-0534-8.
- [14]* J. Reb, J. Narayanan, S. Chaturvedi, Leading mindfully: Two studies on the influence of supervisor trait mindfulness on employee well-being and performance, *Mindfulness*. 5 (2014) 36–45. doi:10.1007/s12671-012-0144-z.

This study developed and tested a model that links leader mindfulness with employee outcomes.

- [15] J. Reb, S. Chaturvedi, J. Narayanan, R.S. Kudesia, Leader mindfulness and employee performance: a sequential mediation model of LMX quality, interpersonal justice, and employee stress, *J. Bus. Ethics*. (2018). doi:10.1007/s10551-018-3927-x.
- [16] W. Brendel, S. Hankerson, S. Byun, B. Cunningham, Cultivating leadership Dharma: Measuring the impact of regular mindfulness practice on creativity, resilience, tolerance for ambiguity, anxiety and stress, *J. Manag. Dev.* 35 (2016) 1056–1078. doi:10.1108/JMD-09-2015-0127.
- [17]* U. Kreplin, M. Farias, I.A. Brazil, The limited prosocial effects of meditation: A systematic review and meta-analysis, *Sci. Rep.* 8 (2018) 1–10. doi:10.1038/s41598-018-20299-z.

* This meta-analysis on mindfulness and prosociality also identified potential biases in mindfulness research.

- [18] J.N. Donald, B.K. Sahdra, B. Van Zanden, J.J. Duineveld, P.W.B. Atkins, S.L. Marshall, J. Ciarrochi, Does your mindfulness benefit others? A systematic review and meta-analysis of the link between mindfulness and prosocial behaviour, *Br. J. Psychol.* (2018). doi:10.1111/bjop.12338.
- [19] M.S. Krasner, R.M. Epstein, H.B. Beckman, A.L. Suchman, B. Chapman, C.J. Mooney, T.E. Quill, Association of an Educational Program in Mindful Communication With Burnout, Empathy, and Attitudes Among Primary Care Physicians, *JAMA*. 302 (2009) 1284. doi:10.1001/jama.2009.1384.
- [20] S.L. Shapiro, G.E. Schwartz, G. Bonner, Effects of Mindfulness-Based Stress Reduction on medical and premedical students, *J. Behav. Med.* 21 (1998) 581–599. doi:10.1023/A:1018700829825.
- [21]* J.E. Gebauer, A.D. Nehrlich, D. Stahlberg, C. Sedikides, A. Hackenschmidt, D. Schick, C.A. Stegmaier, C.C. Windfelder, A. Bruk, J. Mander, Mind-Body Practices and the Self: Yoga and Meditation Do Not Quiet the Ego but Instead Boost Self-Enhancement, *Psychol. Sci.* (2018) 095679761876462. doi:10.1177/0956797618764621.

This study showed that MT (and Yoga) increased self-enhancement mediated by self-centrality.

[22] E. Dane, B.J. Brummel, Examining workplace mindfulness and its relations to job performance and turnover intention, *Hum. Relat.* 67 (2014) 105–128. doi:10.1177/0018726713487753.

[23] M.D. Mrazek, M.S. Franklin, D.T. Phillips, B. Baird, J.W. Schooler, Mindfulness Training Improves Working Memory Capacity and GRE Performance While Reducing Mind Wandering, *Psychol. Sci.* 24 (2013) 776–781.

[24] U.W. Weger, N. Hooper, B.P. Meier, T. Hopthrow, Mindful maths: Reducing the impact of stereotype threat through a mindfulness exercise, *Conscious. Cogn.* 21 (2012) 471–475. doi:10.1016/j.concog.2011.10.011.

[25] P. den Heijer, W. Koole, C.J. Stettina, Don't Forget to Breathe: A Controlled Trial of Mindfulness Practices in Agile Project Teams, in: H. Baumeister, H. Lichter, M. Riebisch (Eds.), *Agile Process. Softw. Eng. Extreme Program.*, Springer International Publishing, Cham, 2017: pp. 103–118. doi:10.1007/978-3-319-57633-6_7.

[26]* L. Yu, M. Zellmer-Bruhn, Introducing team mindfulness and considering its safeguard role against conflict transformation and social undermining, *Acad. Manage. J.* 61 (2018) 324–347. doi:10.5465/amj.2016.0094.

This study developed an instrument to assess team mindfulness and shows that this new construct was associated with less relationship conflict in teams.

[27]* A.C. Hafenbrack, K.D. Vohs, Mindfulness meditation impairs task motivation but not performance, *Organ. Behav. Hum. Decis. Process.* 147 (2018) 1–15. doi:10.1016/j.obhdp.2018.05.001.

This experimental study showed that induced state mindfulness decreased motivation to perform a task, even it was framed as pleasant, but did not affect task performance.

[28]* J. van Berkel, C.R.L. Boot, K.I. Proper, P.M. Bongers, A.J. van der Beek, Effectiveness of a Worksite Mindfulness-Related Multi-Component Health Promotion Intervention on Work Engagement and Mental Health: Results of a Randomized Controlled Trial, *PLoS ONE.* 9 (2014) e84118. doi:10.1371/journal.pone.0084118.

This high-quality study showed that a MT at a worksite was not effective in increasing work engagement and mental health six months post programme completion.

[29] Z. Walsh, E. Ng, R.E. Purser, The promise and perils of corporate mindfulness, in: D. Knights, C. Mabey (Eds.), *Leadersh. Matters Find. Voice Connect. Mean. 21st Century*, Routledge, S.l., 2017: pp. 1–14.

[30] B. Schneider, V. Gonzalez-Roma, C. Ostroff, M.A. West, Organizational climate and culture: Reflections on the history of the constructs in the *Journal of Applied Psychology.*, *J. Appl. Psychol.* 102 (2017) 468–482. doi:10.1037/apl0000090.

[31] S. Einarsen, *Bullying and harassment in the workplace developments in theory, research, and practice.*, CRC Press, Boca Raton, 2011.

[32] C.J. Lyddy, D.J. Good, Being While Doing: An Inductive Model of Mindfulness at Work, *Front. Psychol.* 7 (2017). doi:10.3389/fpsyg.2016.02060.

[33] M.C. Schippers, A.C. Edmondson, M.A. West, Team reflexivity as an antidote to team information-processing failures, *Small Group Res.* 45 (2014) 731–769.

doi:10.1177/1046496414553473.

- [34] J. Lyubovnikova, M.A. West, J.F. Dawson, M.R. Carter, 24-Karat or fool's gold? Consequences of real team and co-acting group membership in healthcare organizations, *Eur. J. Work Organ. Psychol.* 24 (2015) 929–950. doi:10.1080/1359432X.2014.992421.
- [35] E. Salas, M.L. Shuffler, A.L. Thayer, W.L. Bedwell, E.H. Lazzara, Understanding and Improving teamwork in organizations: A scientifically based practical guide, *Hum. Resour. Manage.* 54 (2015) 599–622. doi:10.1002/hrm.21628.
- [36] M.A. West, *Effective teamwork: practical lessons from organizational research*, 3rd ed, BPS Blackwell, Malden, Ma, 2012.
- [37] M.C. Schippers, A.C. Edmondson, M.A. West, Team reflexivity, in: L. Argote, J. Levine (Eds.), *Oxf. Handb. Group Organ. Learn.*, Oxford University Press, Oxford, in press.
- [38] M.A. West, J. Lyubovnikova, R. Eckert, J.-L. Denis, Collective leadership for cultures of high quality health care, *J. Organ. Eff. People Perform.* 1 (2014) 240–260. doi:10.1108/JOEPP-07-2014-0039.
- [39]* M.A. West, R. Chowla, Compassionate leadership for compassionate health care, in: P. Gilbert (Ed.), *Compassion Concepts Res. Appl.*, Routledge, London, 2017: pp. 237–57.

This book chapter defined and illustrated how compassionate leadership creates the necessary conditions for a high-quality and innovative culture in health care

- [40] M.A. West, R. Eckert, B. Collins, R. Chowla, *Caring to change: how compassionate leadership can stimulate innovation in health care*, The King's Fund, London, 2017.
- [41] K.J. Klein, H. Tosi, A.A. Cannella, Multilevel theory building: Benefits, barriers, and new developments, *Acad. Manage. Rev.* 24 (1999) 248–253. doi:10.5465/amr.1999.1893934.
- [42] K.E. Weick, K.M. Sutcliffe, D. Obstfeld, Organizing for high reliability: Processes of collective mindfulness, *Crisis Manag.* 3 (2008) 31–66.
- [43]* K.M. Sutcliffe, T.J. Vogus, E. Dane, Mindfulness in Organizations: A Cross-Level Review, *Annu. Rev. Organ. Psychol. Organ. Behav.* 3 (2016) 55–81. doi:10.1146/annurev-orgpsych-041015-062531.

The authors reviewed a different conceptualization of organizational mindfulness and their points of contact with individual mindfulness research.

- [44] H. Walach, E. Nord, C. Zier, B. Dietz-Waschkowski, S. Kersig, H. Schüpbach, Mindfulness-based stress reduction as a method for personnel development: A pilot evaluation., *Int. J. Stress Manag.* 14 (2007) 188–198. doi:10.1037/1072-5245.14.2.188.
- [45] R.S. Crane, J. Brewer, C. Feldman, J. Kabat-Zinn, S. Santorelli, J.M.G. Williams, W. Kuyken, What defines mindfulness-based programs? The warp and the weft, *Psychol. Med.* 47 (2017) 990–999. doi:10.1017/S0033291716003317.
- [46] J. Reb, J. Narayanan, Z.W. Ho, Mindfulness at Work: Antecedents and Consequences of Employee Awareness and Absent-mindedness, *Mindfulness.* 6 (2015) 111–122. doi:10.1007/s12671-013-0236-4.
- [47] G. Islam, M. Holm, M. Karjalainen, Sign of the times: Workplace mindfulness as an empty signifier, *Organization.* (2017) 135050841774064. doi:10.1177/1350508417740643.

Declaration of interest

Concerning: COP-submission Running too far ahead? The evidence gap on mindfulness training in organizations.

We wish to draw the attention of the Editor to the following facts which may be considered as potential conflicts of interest

- Silke Rupperecht: none.
- Wibo Koole is Director of the Centrum voor Mindfulness, a not-for-profit company that offers mindfulness programs for organizations.
- Michael Chaskalson is CEO of Mindfulness Works Ltd., a company that teaches mindfulness in organizational settings.
- Chris Tamdjidi is director of Kalapa Institute, a company that teaches mindfulness in organizations.
- Michael West: none.

We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript has been approved by all of us.

We confirm that we have given due consideration to the protection of intellectual property associated with this work and that there are no impediments to publication, including the timing of publication, with respect to intellectual property. In so doing we confirm that we have followed the regulations of our institutions concerning intellectual property.

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