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LETTER TO THE EDITOR

Commentary Regarding Johnson et al. (2017) "A Randomized Controlled Evaluation of a Secondary School Mindfulness Program for Early Adolescents: Do We Have the Recipe Right Yet?"

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Recently, Johnson et al. (2017) published the results of a study examining the effect of a nine-lesson mindfulness intervention on adolescent mental health in schools in South Australia ("A randomized controlled evaluation of a secondary school mindfulness program for early adolescents: Do we have the recipe right yet?"). Their results indicated no change in anxiety, depression, weight/shape concerns, well-being, or mindfulness as a result of the mindfulness intervention at the intervention's end, nor any changes at 6- or 12-month follow-up points. Their results were a replication of a null result in their previous study (Johnson et al. 2016 "Effectiveness of a school-based mindfulness program for transdiagnostic prevention in young adolescents"). Their research was well conducted, including randomized control design, a very experienced mindfulness teacher, and sufficient power to detect meaningful effects. They also used a well-established mindfulness program adapted for use in schools (the .b program).

Johnson et al. (2017) concluded that the intervention was not effective, a conclusion we agree with. They provide a number of potential explanations for the lack of effect. One reason stated by the authors is that adolescents may be too cynical for mindfulness to be effective for them. This became the primary reason that was reported in the media for the lack of effect of the mindfulness program (https://digest.bps.org.uk/2017/09/26/perhaps-teens-are-too-cynical-to-benefit-from-mindfulness-say-authors-of-latest-negative-school-trial/). The explanation seemed to be supported by the lack of practice undertaken by students in the trial. Less than 25% of the students completed even 10 min of mindfulness practice at home per week, falling to 7% by follow-up. As such, it is perhaps unsurprising that the students did not show a change in mental health measures—evidence indicates that the benefits of mindfulness practice are only apparent for individuals who practice above a certain threshold (Jha et al. 2017). Additionally, the proposed mechanism of action of mindfulness interventions is a primary change in mindfulness, followed by secondary changes in emotional regulation and other factors, which lead to improved mental health (Coffey and Hartman 2008; Coffey et al. 2010; Hölzel et al. 2011; Shapiro et al. 2006). Without practicing enough mindfulness, averaged data from the students showed no change in mindfulness (the mechanism of action of mindfulness interventions) and thus no changes in outcomes.

The lack of sufficient practice in the study by Johnson et al. (2017) is despite additional methods to try and enhance the likelihood of home practice, including an extra lesson, and added attempts to involve parents. They also added a greater focus on motivating the students, more mindfulness practice in the weekly teaching sessions, brief tests on information taught in the mindfulness sessions, and extra handouts. Additionally, they used methods to try and enhance classroom practice, but did not report wider school support, and in-class uptake by teachers was low. The amount of practice undertaken in the study by Johnson et al. (2017) is also in stark contrast to the 45 min, 6 days per week recommendations of MBSR and MBCT, where meta-analysis has indicated that the amount of mindfulness home practice has been shown to correlate with outcomes (Parsons et al. 2017). Although it is likely that adolescent

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programs are more feasible with a reduction on the 45 min of practice common to adult programs (to ensure participation), it is unlikely that 10 min once per week (as per Johnson et al. 2017) would have an effect.

Although Johnson et al. (2017) are to be commended on an excellent study and for their efforts to engage students in more practice, we would like to suggest that external factors (such as lack of ability to implement mindfulness practice due to limited ability to control their own time) should be eliminated as explanations before explanations that involve inferences about the internal state of participants are proposed (for example, that students do not benefit due to cynicism). Explanations that make inferences about internal states are more likely to result in the categorical perception that mindfulness does not work for students, as demonstrated by the media report on Johnson et al.'s (2017) study that "teens are too cynical to benefit from mindfulness." This is not a valid conclusion to draw from Johnson et al.'s (2017) study given the lack of change in mindfulness (the mechanism of action of the intervention). It also conflicts with the findings of multiple meta-analyses that indicate a positive effect in youth and schools (Klingbeil et al. 2017; Zenner et al. 2014; Zoogman et al. 2015). This point is important, because the risk of providing an explanation for a lack of effect involving the internal state of participants is that the explanation is more likely to prevent the implementation of potentially useful programs, despite the lack of ability of the study to rule out external factors. The more accurate conclusion is that "teaching teens mindfulness without allocating practice time does not improve outcomes."

Additionally, the self-report measures of interest, enjoyment, and amount learned indicated averages of ~ 7/10 (Johnson et al. 2017). These results suggest that the students were interested and felt like they learnt from the mindfulness teaching sessions. This suggests the lack of effect in their study was not due to internal states of the participants (the explanation is not that mindfulness interventions for school students do not work due to their cynicism towards the practice). We think it is more likely to be due to a lack of the students' capacity to take on "optional extras" such as mindfulness. School curriculums are considered overburdened, and adolescents and teachers struggle for time to meet the demands of even the usual assessment expectations, without the addition of mindfulness practice to be voluntarily pursued (Aikenhead 2002; Bartlett 2004; Hacker and Rowe 1997; Valli and Buese 2007).

Reviews of mindfulness in schools have suggested that interventions should be implemented with an understanding of the students' broader context, as students are subject to demands and systems that they do not have control over (Chadwick and Gelbar 2016). From this perspective, it is unlikely that students who are already struggling for time in their day will pursue the optional extra homework that mindfulness practice represents. Mindfulness is only suggested to benefit student's mental health, and a contextual perspective indicates they are more likely to focus on tangible factors such as grades. We would like to suggest that adding another time-consuming activity to an adolescent's day without removing any other activity is adding a burden when a student may not have the capacity to implement and benefit from the activity. As a result, the student may either ignore the addition of mindfulness, or even worse, the addition of mindfulness may create another stressor.

Additionally, researchers have suggested the practice of conveying mindfulness to a conscripted audience such as students is important, but not allocating any systematic time for the practice is ethically questionable (O'Donnell 2015). This approach may convey a number of implicit messages, such as that mental health is the student's own responsibility and is not externally supported, or that mindfulness for mental health is not important enough to be part of the core curriculum. In this context, poor or worsening mental health can be perceived as the student's failure, despite a context that may not allow them sufficient control over their time to pursue recommended actions such as mindfulness to prevent mental health issues. The lack of control is also most likely to affect at-risk students, who are most in need, contributing to issues of inequality.

Johnson et al. (2017) did suggest that research could investigate whether short daily at-school practice might increase effectiveness. Our suggestion is that mindfulness in the school day should be viewed as the "main course," and home practice as an encouraged but optional extra. Indeed, a "whole-school approach" is recommended to lead to the most effective mindfulness programs in schools (Kielty et al. 2017). The best way to achieve this would be to have a minimum basic training for all teachers during teacher training and to formalize time for mindfulness practice into the curriculum to help with teacher engagement. Minimizing teacher burden is important for continued implementation (Dariotis et al. 2017), so Johnson et al.'s (2017) suggestion of providing teachers with audio files is worth pursuing. These methods would provide the systematic support to allow students the time and space to practice mindfulness. Only if students are provided with the time to implement mindfulness practice will we obtain information about whether their internal state could be an explanation for their lack of improvement as a result of a mindfulness program. Until researchers offer students both the teaching of mindfulness and the time to practice it, we may be offering them a gift that they have no place to keep.

Compliance with Ethical Standards

Conflict of Interest NWB, RC, and CSH have no conflicts to declare. AW is the CEO of Smiling Mind.

References

Aikenhead, G. (2002). The educo-politics of curriculum development: a response to Peter Fensham's 'time to change drivers for scientific literacy'. *Canadian Journal of Math, Science & Technology Education, 2*(1), 49–57.

Bartlett, L. (2004). Expanding teacher work roles: a resource for retention or a recipe for overwork? *Journal of Education Policy, 19*(5), 565–582.

Chadwick, J., & Gelbar, N. W. (2016). Mindfulness for children in public schools: current research and developmental issues to consider. *International Journal of School & Educational Psychology, 4*(2), 106–112.

Coffey, K. A., & Hartman, M. (2008). Mechanisms of action in the inverse relationship between mindfulness and psychological distress. *Complementary Health Practice Review, 13*(2), 79–91.

Coffey, K. A., Hartman, M., & Fredrickson, B. L. (2010). Deconstructing mindfulness and constructing mental health: understanding mindfulness and its mechanisms of action. *Mindfulness, 1*(4), 235–253.

Dariotis, J. K., Mirabal-Beltran, R., Cluxton-Keller, F., Feagans Gould, L., Greenberg, M. T., & Mendelson, T. (2017). A qualitative exploration of implementation factors in a school-based mindfulness and yoga program: lessons learned from students and teachers. *Psychology in the Schools, 54*(1), 53–69.

Hacker, R. G., & Rowe, M. J. (1997). The impact of a National Curriculum development on teaching and learning behaviours. *International Journal of Science Education, 19*(9), 997–1004.

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science, 6*(6), 537–559.

Jha, A. P., Morrison, A. B., Parker, S. C., & Stanley, E. A. (2017). Practice is protective: mindfulness training promotes cognitive resilience in high-stress cohorts. *Mindfulness, 8*(1), 46–58.

Johnson, C., Burke, C., Brinkman, S., & Wade, T. (2016). Effectiveness of a school-based mindfulness program for transdiagnostic prevention in young adolescents. *Behaviour Research and Therapy, 81*, 1–11.

Johnson, C., Burke, C., Brinkman, S., & Wade, T. (2017). A randomized controlled evaluation of a secondary school mindfulness program for early adolescents: do we have the recipe right yet? *Behaviour Research and Therapy, 99*, 37–46.

Kielty, M. L., Gilligan, T. D., & Staton, A. R. (2017). Whole-school approaches to incorporating mindfulness-based interventions: supporting the capacity for optimal functioning in school settings. *Childhood Education, 93*(2), 128–135.

Klingbeil, D. A., Renshaw, T. L., Willenbrink, J. B., Copek, R. A., Chan, K. T., Haddock, A., et al. (2017). Mindfulness-based interventions with youth: a comprehensive meta-analysis of group-design studies. *Journal of School Psychology, 63*, 77–103.

O'Donnell, A. (2015). Contemplative pedagogy and mindfulness: developing creative attention in an age of distraction. *Journal of Philosophy of Education, 49*(2), 187–202.

Parsons, C. E., Crane, C., Parsons, L. J., Fjorback, L. O., & Kuyken, W. (2017). Home practice in mindfulness-based cognitive therapy and mindfulness-based stress reduction: a systematic review and meta-analysis of participants' mindfulness practice and its association with outcomes. *Behaviour Research and Therapy, 95*, 29–41.

Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology, 62*(3), 373–386.

Valli, L., & Buese, D. (2007). The changing roles of teachers in an era of high-stakes accountability. *American Educational Research Journal, 44*(3), 519–558.

Zenner, C., Herrnleben-Kurz, S., & Walach, H. (2014). Mindfulness-based interventions in schools—a systematic review and meta-analysis. *Frontiers in Psychology, 5*.

Zoogman, S., Goldberg, S. B., Hoyt, W. T., & Miller, L. (2015). Mindfulness interventions with youth: a meta-analysis. *Mindfulness, 6*(2), 290–302.