

ADHD AND MINDFULNESS EXERCISE: EASTERN THOUGHT EXPANDING WESTERN PRACTICE

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ABSTRACT

This roundtable presents mindfulness exercise as a transformative approach in the teaching and learning process. It discusses how this ancient eastern meditation technique can holistically empower adult learners with Attention Deficit Hyperactivity Disorder (ADHD).

Keywords: Mindfulness, ADHD, Attention Deficit Hyperactivity Disorder

INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) was officially recognized as an "Other Health Impairment" under the Individuals with Disabilities Education Act (IDEA) in 1997 (Morin, n.d.). ADHD is often characterized by impulsivity, difficulty maintaining attention and focus, poor organizational and planning skills, difficulty completing tasks, and increased frustration with daily activities (Fugate, 2018; Kotsopoulos, Connolly, Sobanski, & Postma, 2013; Lovecky, 2018). Adult learners with ADHD are significantly impacted by higher levels of stress, low self-esteem, as well as difficulties with interpersonal relationships resulting in a higher risk for a multitude of comorbid disorders (Harris, Lambie, & Hundley, 2018; Kwon, Kim, & Kwok, 2018), which may cause failures in their learning that generates disappointment from family, peers, and teachers that increases future impairment (Eddy et al., 2018). This also leads to long-term negative impacts including lower graduation rates and higher rates of unemployment (Solanto et al., 2010).

Mindfulness exercise, widely applied in healthcare, psychology, business, and education, provides alternative treatments both medically and psychologically (Meiklejohn et al., 2012; Sun, 2019), and may help mitigate these negative consequences. Mindfulness exercise, historically rooted in Buddhist practices, has merged into a contemporary western secular form enhancing "awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 144). Mindfulness is simply about experiencing the present moment honestly for what it is (Wisner, 2014). Therefore, it allows learners to stay present-focused in a positive, non-reactive, or reflexive way (Meiklejohn et al., 2012), which helps facilitate their learning and wellbeing.

ADHD LEARNERS

ADHD diagnoses among adults are increasing (Kwon et al., 2018). Multiple studies show the prevalence for ADHD in the adult learner population is between 2% - 8% (Schaefer et al., 2018; Tinklenberg, Patel, Gelman, & Albucher, 2017). Most studies found the economic impacts of ADHD focus on the costs of obtaining healthcare, suffering from a lack of work productivity, and higher rates of unemployment, but they underestimate the true costs of the disorder that will persist throughout an individual's life. Adults with ADHD are also more likely to have substance abuse disorders, be involved in more traffic accidents, and are more likely to be incarcerated (Kotsopoulos et al., 2013). Understanding and facilitating adult learners

with ADHD is significant because the success of their educational attainment directly impacts their life, including their wellbeing and earnings.

Recent findings suggest that issues with Executive Functioning (EF) could play a role in ADHD, with numerous studies showing that learners with ADHD perform worse on EF tasks in comparison to control groups (Weyandt et al., 2017). Adult learners with ADHD tend to perform worse on memory tasks and have difficulty managing their impulsivity and sustaining their attention (Weyandt et al., 2017). Working Memory (WM) is a key factor in ADHD because of the information processing occurring during multiple stages to encode, maintain, and retrieve information (Kim et al., 2014). Dysfunctions occurring in the parietal brain region and the prefrontal cortex have been associated with EF and WM impairments (Bachmann et al., 2018). These regions of the brain are highly important to self-regulation (Schoenberg et al., 2014).

MINDFULNESS

Mindfulness exercise improves deficits caused by ADHD by allowing the practice of attention control and the regulation of emotions which strengthens the regions of the brain, the frontal and parietal regions, where these deficits occur (Bachmann et al., 2018). Mindfulness is a state of mind as opposed to a set of specific practices and at its core, is focused on the ability to accept feelings in the present moment in a nonreactive or judgmental way (Schonert-Reichl et al., 2015). Mindfulness can include formal or informal practices, with formal practice often focused on meditation and intentionally attending to the mind or body through breathing or yoga, whereas informal practices can be threaded throughout daily activities such as walking, cleaning, or eating (Meiklejohn et al., 2012). Studies have shown that mindfulness-based practices improve the ways in which learners manage stress, enhance their attentiveness, promote calm, enhance engagement, and improve their overall state of mind (Bluth et al., 2016).

Looking to Eastern culture to expand Western practice (Sun, 2019), mindfulness exercise may positively transform learners with ADHD, their family, peers, educators, and institutions. Research confirms positive outcomes associated with mindfulness for improving emotional regulation and mental health including reducing stress and anxiety (Kabat-Zinn, 2003). This can allow adult learners to achieve what Mezirow (1978) describes as a "major reordering of reality and redefinition of one's own possibilities" (p. 103).

This round table presents how mindfulness may be used as an instructional approach (Sun, 2019) to benefit adult learners with ADHD by infusing a different mindset of transformative learning and perspective transformation (Mezirow, 1999, 2000). It also looks to Eastern culture and discusses how to expand the Western practice of mindfulness exercise to positively transform learners with ADHD, their family, peers, educators, and institutions through the process of perspective transformation. This research holds significance regarding mindfulness as a holistic transformative approach for Adult ADHD learners, adult educators, and educational policy makers.

REFERENCES

Bachmann, K., Lam A. P., Soros, P., Kanat, M., Hoxhaj, E., Matthies, S., ... Phillipsen, A. (2018). Effects of mindfulness and psychoeducation on working memory in adult ADHD: A randomised controlled fMRI study. *Behavior Research and Therapy, 106*, 47-56. Retrieved from <https://doi.org/10.1016/j.brat.2018.05.002>.

- Bluth, K., Campo, R. A., Pruteanu-Malinici, S., Reams, A., Mullarkey, M., & Broderick, P. C. (2016). A school-based mindfulness pilot study for ethnically diverse at-risk adolescents. *Mindfulness, 7*(1), 90-104. Retrieved from <http://dx.doi.org/10.1007/s12671-014-0376-1>.
- Eddy, L. D., Dvorsky, M. R., Molitor, S. J., Bourchtein, E., Smith, Z., Oddo, L. E., ...Langberg, J. M. (2018). Longitudinal evaluation of the cognitive-behavioral model of ADHD in a sample of college students with ADHD. *Journal of Attention Disorders, 22*(4), 323-333. Retrieved from <https://doi.org/10.1177/1087054715616184>.
- Fugate, C. M. (2018). Attention divergent hyperactive giftedness: Taking the deficiency and disorder out of the gifted/ADHD label. In S. B. Kaufman (Ed.), *Twice Exceptional: Supporting and Educating Bright and Creative Students with Learning Difficulties* (pp. 191-200). New York, NY: Oxford University Press.
- Harris, S., Lambie, G. W., & Hundley, G. (2018). The effects of neurofeedback training on college students' attention deficit hyperactivity disorder symptoms. *Counseling Outcome Research and Evaluation, 10*(2), 64-77. Retrieved from <https://doi.org/10.1080/21501378.2018.1442679>.
- Hirsch, O., Chavanon, M., Riechmann, E., & Christiansen, H. (2018). Emotional dysregulation is a primary symptom in adult attention-deficit/hyperactivity disorder (ADHD). *Journal of Affected Disorders, 232*, 41-47. Retrieved from <http://dx.doi.org/10.1016/j.jad.2018.02.007>.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144-156. Retrieved from <http://dx.doi.org/10.1093/clipsy.bpg016>
- Kim, S., Liu, Z., Glizer, D., Tannock, R., & Woltering, S. (2014). Adult ADHD and working memory: Neural evidence of impaired coding. *Clinical Neurophysiology, 125*, 1596-1603. Retrieved from <https://doi.org/10.1016/j.clinph.2013.12.094>.
- Kotsopoulos, N., Connolly, M. P., Sobanski, E., & Postma, M. J. (2013). The fiscal consequences of ADHD in Germany: A quantitative analysis based on differences in educational attainment and lifetime earnings. *The Journal of Mental Health Policy and Economics, 16*, 27-33. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/23676413>.
- Kwon, S. J., Kim, Y., & Kwak, Y. (2018). Difficulties faced by university students with self-reported symptoms of attention-deficit hyperactivity disorder: A qualitative study. *Child and Adolescent Psychiatry and Mental Health, 12*(12). Retrieved from <https://doi.org/10.1186/s13034-018-0218-3>.
- Lovecky, D. V. (2018). Misconceptions about giftedness and the diagnosis of ADHD and other mental health disorders. In S. B. Kaufman (Ed.), *Twice Exceptional: Supporting and Educating Bright and Creative Students with Learning Difficulties* (pp. 83-103). New York, NY: Oxford University Press.
- Meiklejohn, J., Phillips, C., Freedman, M. L., Griffin, M. L., Biegel, G., Roach, A., ... Saltzman, A. (2012). Integrating mindfulness training into K-12 education: Fostering the resilience of teachers and students. *Mindfulness, 3*(4), 291-307. Retrieved from <http://dx.doi.org/10.1007/s12671-012-0094-5>.
- Mezirow, J. (1978). Perspective transformation. *Adult Education Quarterly, 28*(2), 100-110. Retrieved from <https://doi-org.proxy.lib.utk.edu/10.1177/074171367802800202>.
- Morin, A. (n.d.). A timeline of learning and attention issues. *Understood*. Retrieved from https://www.understood.org/en/learning-attention-issues/getting-started/what-you-need-to-know/a-timeline-of-learning-and-attention-issues?gclid=Cj0KCQjwgb3OBRDNARIsAOyZbxDnqC7h0XGhdg0w5qcUa1DtCwj3VhzoQd2mDzHPOwE4UBNSxD95ORAAAlOgEALw_wcB.
- Schaefer, M. R., Wagoner, S. T., Young, M. E., Kavookjian, J., Shapiro, S., & Gray, W. N. (2018). Parent perceptions of their college students' self-management of attention-deficit/hyperactivity disorder. *Journal of Adolescent Health, 63*(5), 636-642. Retrieved from <https://doi.org/10.1016/j.jadohealth.2018.05.033>.
- Schoenberg, P. L., Hepark, S., Kan, C. C., Barendregt, H. P., Buitelaar, J. K., & Speckens, A. E. (2014). Effects of mindfulness-based cognitive therapy on neurophysiological correlates of performance monitoring in adult attention-deficit/hyperactivity disorder. *Clinical Neurophysiology, 125*(7), 1407-1416. Retrieved from <https://doi.org/10.1016/j.clinph.2013.11.031>.
- Schonert-Reichl, K. A. & Lawlor, M. S. (2010). The effects of a mindfulness-based education program on pre-and early adolescents' well-being and social and emotional competence. *Mindfulness, 1*(3), 137-151. Retrieved from <http://dx.doi.org/10.1007/s12671-010-0011-8>.
- Solanto, M. V., Marks, D. J., Wasserstein, J., Mitchell, K., Abikoff, H., Alvir, J. J., & Kofman, M. D. (2010). Efficacy of meta-cognitive therapy for adult ADHD. *American Journal of Psychiatry, 167*(8), 958-968. Retrieved from <https://doi.org/10.1176/appi.ajp.2009.09081123>.

- Sun, Q. (2019). Eastern thoughts, Western practices: Meditation and mindfulness relaxation activities for learning and well-being in adult and higher education. In E. J. Tisdell., K. Gupta, & K. Archuleta (Eds.). *Meditation and mindfulness in adult education* (pp. 45-55). New Directions for Adult and Continuing Education, no. 161, San Francisco: Jossey-Bass.
- Tinklenberg, J., Patel, B., Gelman, K., & Albucher, R. (2017). Assessing adult attention deficit hyperactivity disorder (ADHD) in the university setting. *Journal of American College Health, 66*(2), 141-144. Retrieved from <https://doi.org/10.1080/07448481.2017.1389733>.
- Weyandt, L. L., Oster, D. R., Gudmundsdottir, B. G., & DuPaul, G. J. (2017). Neuropsychological functioning in college students with and without ADHD. *Neuropsychology, 31*(2), 160-172. Retrieved from <http://dx.doi.org/10.1037/neu0000326>.
- Wisner, B. L. (2014). An exploratory study of mindfulness meditation for alternative school students: Perceived benefits for improving school climate and student functioning. *Mindfulness, 5*, 626-638. Retrieved from <http://dx.doi.org/10.1007/s12671-013-0215-9>.
- Yavuz, B. G., Yavuz, M., & Onal, A. (2018). Examining the factors that are correlated with mindfulness with a focus on attention deficit hyperactivity symptoms. *Perspectives in Psychiatric Care, 54*(4), 596-602. Retrieved from <http://dx.doi.org/10.1111/ppc.12290>