Article title: Baseline imbalance about depressive symptoms may overestimate the effectiveness of mindfulness-based cognitive therapy for anxiety disorders.

Authors: Takuya Oka[1], Jun Watanabe[2], Yasushi Tsujimoto[3]

Affiliations: Autism and Developmental Disorders Clinic[1], Department of Surgery, Tottori Prefectural Central Hospital[2], Department of Nephrology and Dialysis, Kyoritsu Hospital[3]

Orcid ids: 0000-0003-1827-6112[1]

Contact e-mail: oka-t@asd-dd.jp

License information: This work has been published open access under Creative Commons Attribution License <http://creativecommons.org/licenses/by/4.0/>, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. Conditions, terms of use and publishing policy can be found at <https://www.scienceopen.com/>.

Preprint statement: This article is a preprint and has not been peer-reviewed, under consideration and submitted to ScienceOpen Preprints for open peer review.

DOI: 10.14293/S2199-1006.1.SOR-.PPBPG7K.v1

Preprint first posted online: 17 March 2020

Keywords: mindfulness-based cognitive therapy, anxiety disorder, psychotherapy

**Baseline imbalance about depressive symptoms may overestimate effectiveness of
mindfulness-based cognitive therapy for anxiety disorders.**

Takuya Oka MD ^{a,b,c}, Jun Watanabe MD ^{c,d,e}, Yasushi Tsujimoto MD, MPH ^{c,f,g}

^a Autism and Developmental Disorders Clinic, 4F Nihonbashi Olive Bldg. 3-2-3 Hongoku-cho, Nihonbashi, Chuo-ku, Tokyo 103-0021, Japan(oka-t@asd-dd.jp)

^b Department of Preventive Intervention for Psychiatric Disorders, National Center of Neurology and Psychiatry, 4-1-1 Ogawa-higashi, Kodaira, Tokyo 187-8533, Japan

^c Systematic Review Workshop Peer Support Group (SRWS-PSG), Japan

^d Department of Surgery, Tottori Prefectural Central Hospital, 730 Ezu Tottori City, Tottori, 680-0901 Japan(m06105jw@jichi.ac.jp)

^e Center for Community Medicine, Jichi Medical University, 3311-1 Yakushiji Shimotsuke City, Tochigi, 329-0498 Japan

^f Department of Nephrology and Dialysis, Kyoritsu Hospital, Chuo-cho 16-5, Kawanishi 666-0016 Japan(yssh0108@yahoo.co.jp)

^g Healthcare Epidemiology, School of Public Health in the Graduate School of Medicine, Kyoto University, Kyoto, Japan

Correspondence should be directed to: Takuya Oka, Autism and Developmental Disorders Clinic, 4F Nihonbashi Olive Bldg. 3-2-3 Hongoku-cho, Nihonbashi, Chuo-ku, Tokyo, 103-0021, Japan, E-mail: oka-t@asd-dd.jp, Tel: +81-3-6665-0170, Fax: +81-3-6665-0171

We read the article by Ninomiya et al (1). with great interest and appreciate the author's efforts to analyze the effect of primary mindfulness-based cognitive therapy (MBCT) in patients with anxiety disorder in secondary-care settings, compared with a waiting-list group. However, we have concerns about baseline imbalance of depressive symptoms that may influence the conclusion of the trial.

Comorbid major depressive disorder can have caused an underestimation of anxiety symptoms in the waiting-list group and distort effectiveness of MBCT. The wait-list group had more severe depressive symptoms than the intervention group, about 7 points more in the Center for Epidemiologic Studies Depression Scale (CES-D) scores, and that group might have more major depressive disorder. Indeed, the rate of antidepressant use in the wait-list group was 25% higher than the intervention group.

It is well known that major depressive disorder is associated with cognitive errors and underestimation of self-report outcomes (2, 3). Baseline imbalance of depressive symptoms may therefore weaken the conclusion of the study, because all outcome measures were self-report questionnaires.

The authors should acknowledge the limitation and provide information about the diagnosis of major depressive disorder.

References

1. Ninomiya, A., Sado, M., Park, S et al. (2020). Effectiveness of mindfulness-based cognitive therapy in patients with anxiety disorders in secondary-care settings: A randomized controlled trial. *Psychiatry and Clinical Neurosciences*, 74(2), 132-139.
2. Miranda, R., & Mennin, D. S. (2007). Depression, generalized anxiety disorder, and certainty in pessimistic predictions about the future. *Cognitive Therapy and Research*, 31(1), 71-82.
3. Blake, E., Dobson, K. S., Sheptycki, A. R., & Drapeau, M. (2016). The relationship between depression severity and cognitive errors. *American Journal of Psychotherapy*, 70(2), 203-221.