

# Negative bias to sad facial expressions in depressive symptomatology: Considering the autism spectrum

Anna Nakamura

---

**ABSTRACT:** Although depression as a state is qualitatively equal for both clinical major depressive disorder (MDD) and non-clinical groups, the state of non-clinical depressive symptomatology still has room for consideration. The negative bias of cognition in MDD has been intensively examined. In particular, negative bias in facial expression recognition leads to less satisfaction in the interpersonal relationship, which causes the aggregation of depression. Nakamura et al., first revealed that negative bias to sad facial expressions exists for non-clinical individuals with higher depressive symptoms. However, no research has examined the effects of the autism spectrum (AS) so far. Autism spectrum disorders involve a high risk of depression and facial expression recognition is a part of the Theory of Mind, which is typically inhibited in AS. The purpose of this research was

to discover the effects of AS on non-clinical depression and on the negative bias to sad faces related to depression.

Negative bias was measured using facial task, displaying the whole facial stimuli (happy/sad faces at 4 intensity level) and asking participants to label stimuli according to three options: happy, neutral and sad. Depression was measured by 2nd edition Beck Depression Inventory (BDI) and AS by Autism-Spectrum Quotient (AQ). Participants were 58 university students. This experiment first considered AS's effects on negative bias in non-clinical depression and showed that the negative bias toward sad faces is independently due to depression. The findings can contribute to the understanding of nonclinical depression and its prevention.

---

## Biography:-

Anna Nakamura is a clinical psychologist and a PhD researcher in Japan. As a practitioner, she has been mainly working with cognitive and behavioral therapy to conditions such as depression and obsession. Through her clinical experience in hospitals and with education, her passion for improving

mental health has increased and she learned the current status and issues in various clinical fields. As a researcher, she has a background of experimental psychology on perception and cognition. She has the ability to infer how the world is looked and felt by people that enables her to look from the depressed patient's point of view. Her clinical and academic skills are advancing interactively, which makes her a unique expert in depression.

---

University of Tokyo, Japan



This open-access article is distributed under the terms of the Creative Commons Attribution Non-Commercial License (CC BY-NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits reuse, distribution and reproduction of the article, provided that the original work is properly cited and the reuse is restricted to noncommercial purposes. For commercial reuse, contact [reprints@pulsus.com](mailto:reprints@pulsus.com)