

Effect of AI-based Intervention on Psychological Flexibility on Work Engagement

Honoka Muramatsu¹, Nao Ozawa², Kotaro Shindo¹, Saori Chikami³, Daiki Takegawa³ and Tomu Ohtsuki⁴

¹Graduate School of Human Sciences, Waseda Univ. ²Undergraduate School of Human Sciences, Waseda Univ. ³emol Inc. ⁴Faculty of Human Sciences, Waseda Univ.

Introduction

Work engagement (WE) is a positive and fulfilling psychological state associated with work, characterized by vigor, enthusiasm, and immersion, and is a sustained and generalized feeling and cognition directed toward work (Schaufeli et al., 2002).

Acceptance and Commitment Therapy has also been shown to influence improvements in mental health at work (Bond et al., 2008).

Smartphone apps may be a useful tool for easy psychological education.

However, studies of CBT interventions using smartphone apps are still scarce (Kobayashi, 2019).

In this study, we will implement an exercise to increase psychological flexibility using an AI chat tool and examine its effect on WE.

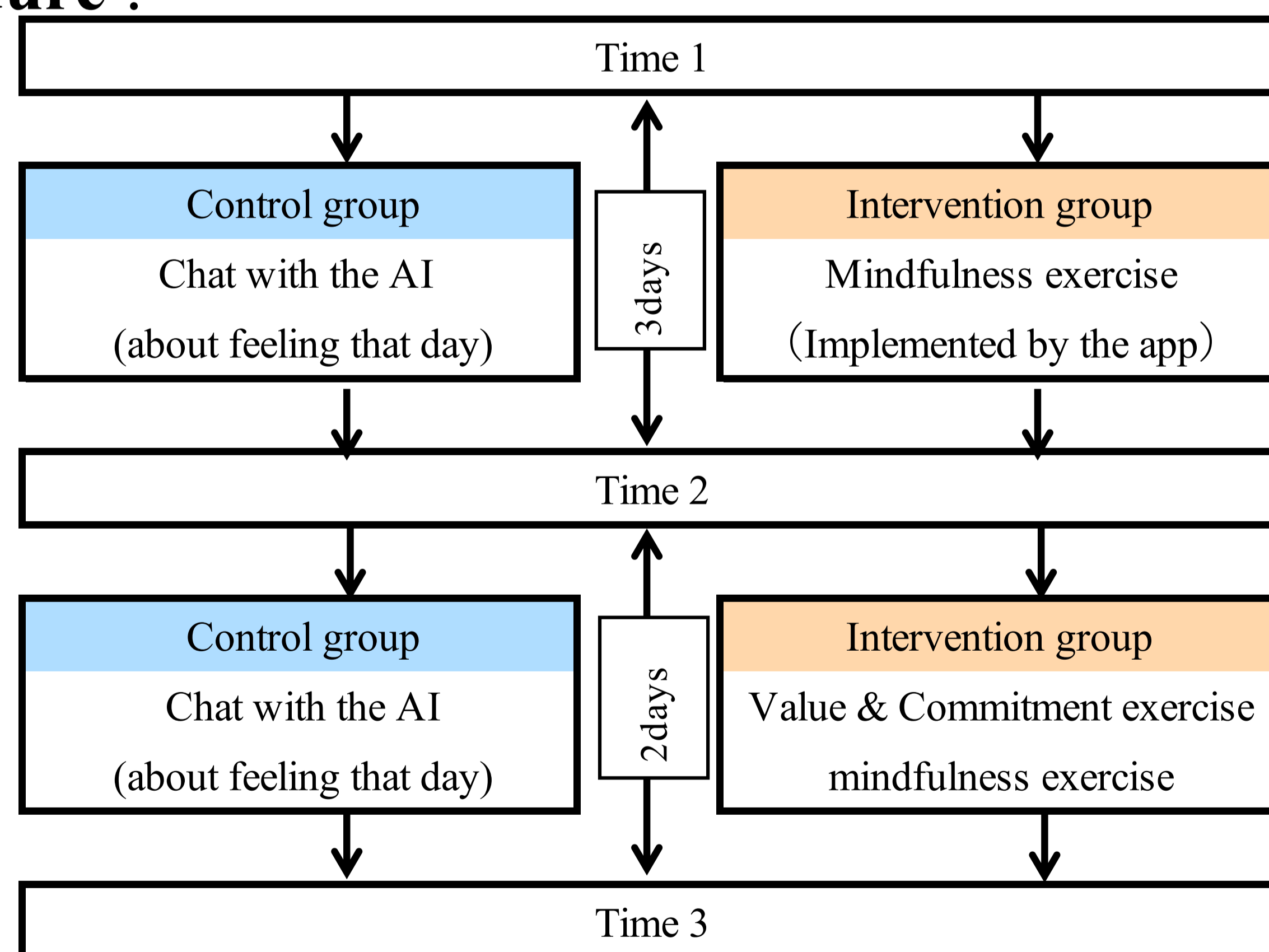
Method

Participants : 20 Japanese university and graduate students (1 male, 19 female) who work part-time job at least two days a week.

Interventions : We randomly assigned to 2 groups.

- 1) Control group: No exercise, chat with AI on the app
- 2) Intervention group: Exercising while chatting with AI on the app

Procedure :



Measures :

- ① Japanese version of Acceptance and Action Questionnaire II (AAQ-II; Shima, Yanagihara, Kawai & Kumano, 2013)
- ② Stress Response Scale (SRS-18; Suzuki et al., 1997)
- ③ The Japanese Utrecht Work Engagement Scale (UWES-J; Shimazu, Schaufeli, Okada & Kosugi, 2008)

Results

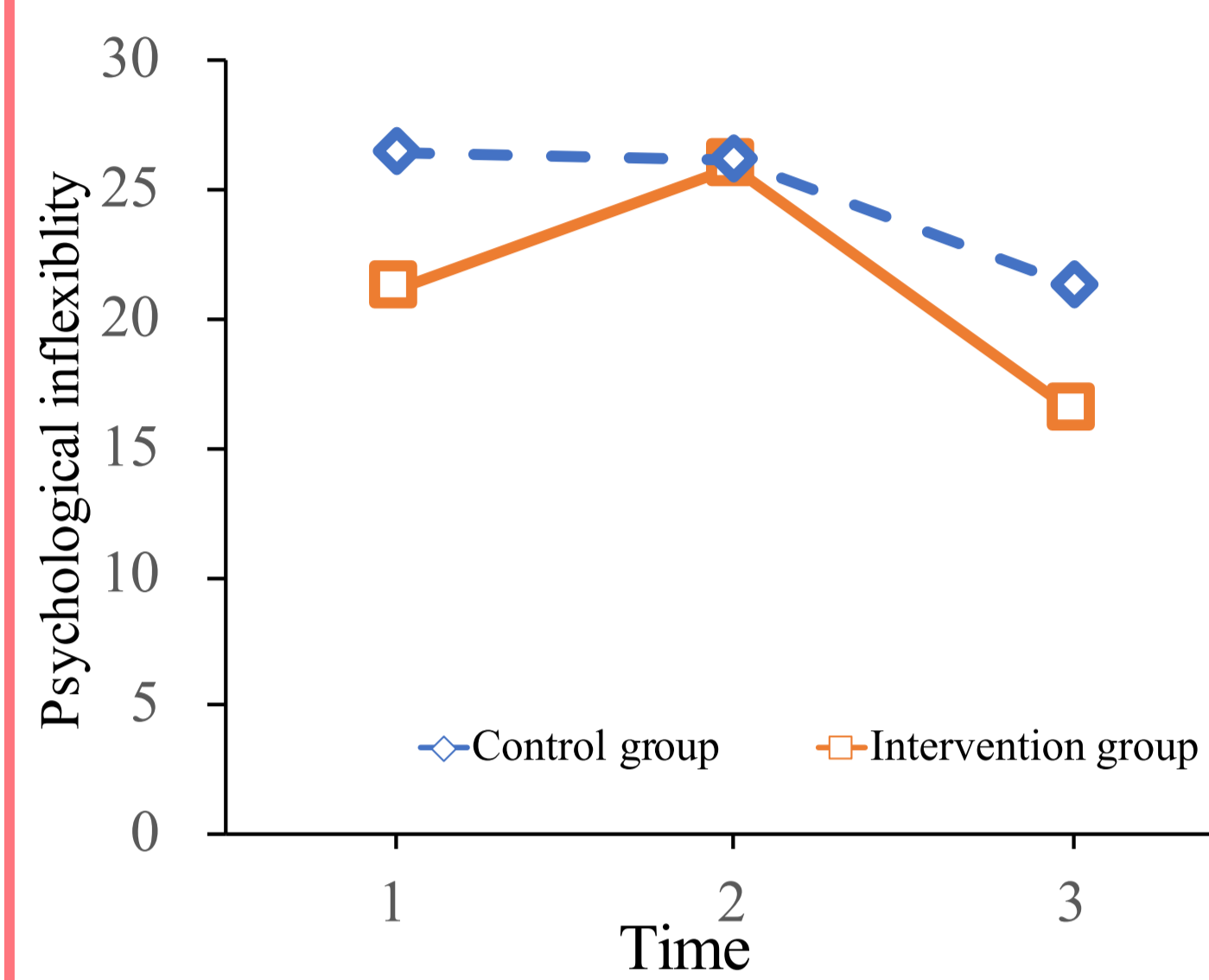


Figure1 Total score of AAQ-II

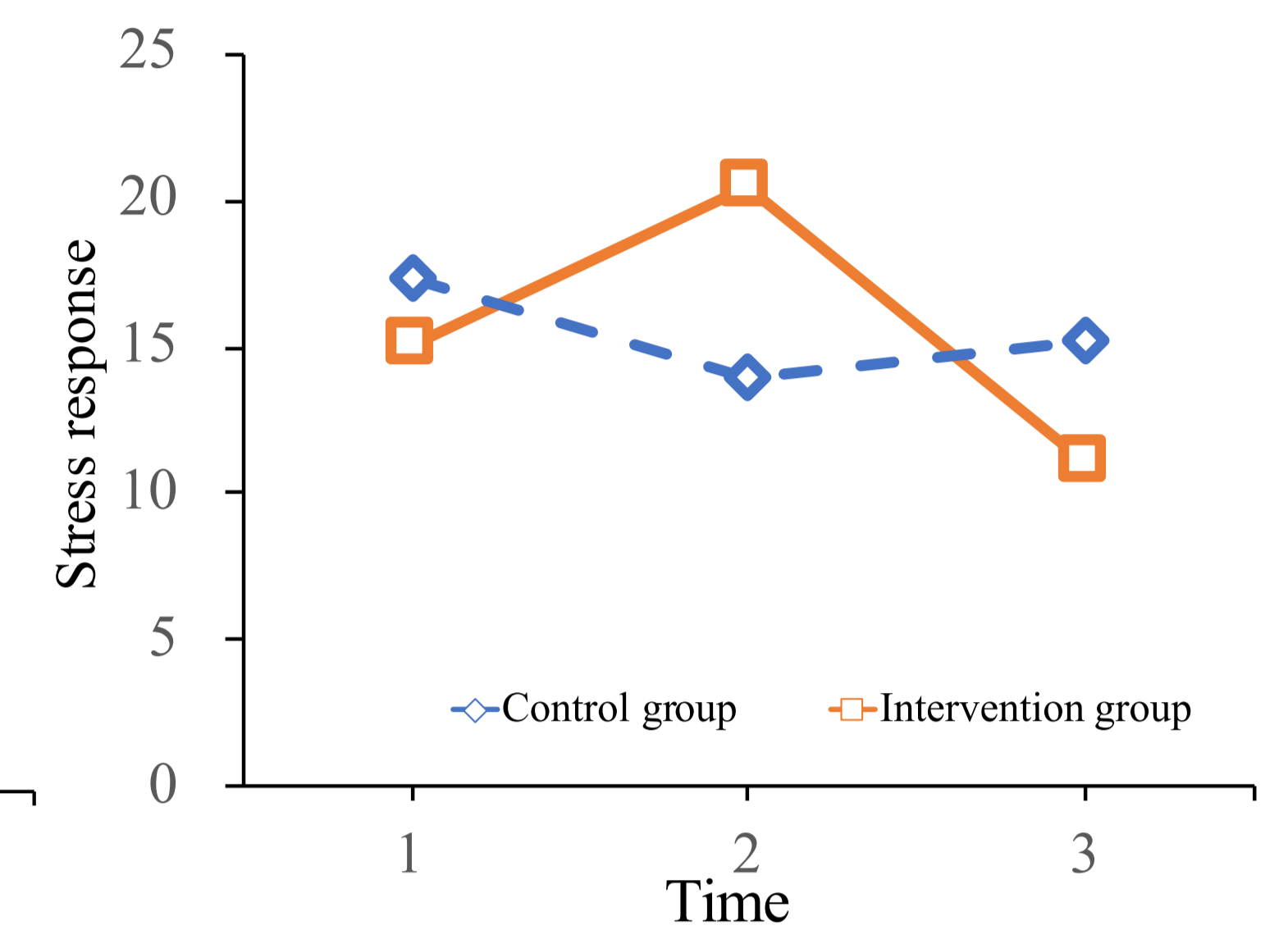


Figure2 Total score of SRS-18

We conducted a two-factor repeated measures ANOVA.

- ① AAQ-II (Figure 1): Significant effect in time ($F(2,34) = 7.93, p < .01$).
- ② SRS-18 (Figure 2): Significant effect in interaction ($F(2,34) = 3.490, p < .05$), the simple main effect of time occurred in the intervention group ($F(2,16) = 4.39, p < .05$). Multiple comparisons showed significant difference between time 2 and time 3 in intervention group ($p < .05$).
- ③ UWES-J: No significant effect on intervention.

Discussion

In this study, psychological flexibility and WE were not improved by ACT exercises performed with a smartphone app.

Although this study did not include a no-intervention group, it was possible that AI chat could improve psychological flexibility.

In addition, we found that interventions using smartphone applications were effective in reducing stress.

The results showed promise for new methods of psychological intervention using AI chat in ACT.

References

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