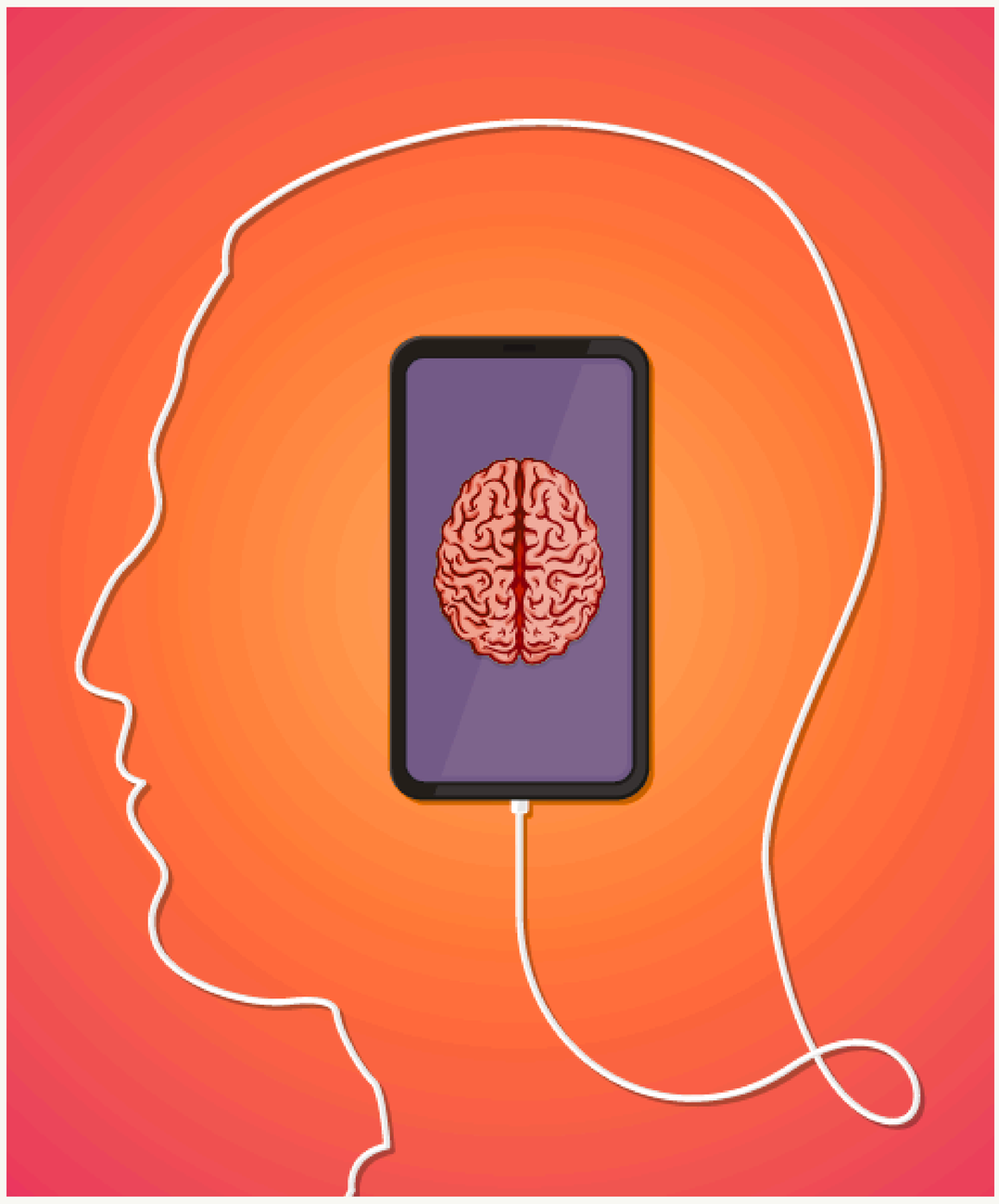
The Effects of Episodic Future Thinking on Intention and Adherence of a Digital Mental Health Intervention

Erik Yan Ching Persson & Prof. Winnie W.S. Mak

Department of Psychology, The Chinese University of Hong Kong



INTRODUCTION

Mental health concerns are prevalent in Hong Kong, with recent surveys showing 44% of young adults have moderate to severe depressive symptoms (The Mental Health Association of Hong Kong, 2024). Digital Mental Health Interventions (DMHIs) offer accessible support, but face significant adherence challenges. Episodic Future Thinking (EFT) which involves mentally projecting oneself into future positive scenarios (Atance & O'Neill, 2001), has shown promise in enhancing health behaviors (e.g. Bickel et al., 2020; Chew et al., 2024; Qin, 2021; Voss et al., 2022). This study examines whether EFT can increase intention to use and adherence to a DMHI for stress management and emotion regulation

RESEARCH QUESTIONS

1. Does EFT increase intention to use a DMHI compared to a control task?
2. Does EFT increase adherence to a DMHI through intention?
3. Does EFT improve intervention outcomes (well-being, depression, anxiety, self-efficacy) through intention and adherence?
4. Is the effect of EFT on intention moderated by factors like regulatory focus, optimism, or future thinking clarity?

METHODOLOGY

- Design: Two-armed randomized controlled trial
- Participants: 264 adults (72% female, mean age = 28.3)
- Intervention:
  - Experimental group: Completed EFT tasks imagining positive future events enhanced by stress management skills
  - Control group: Completed an image description tasks
  - Both groups: Accessed a 28-day online CBT-based program for stress management
- Measurements: Baseline, 14 days, 28 days
  - Primary outcomes: Intention to use, program adherence
  - Secondary outcomes: Well-being , depression, anxiety , self-efficacy
  - Moderators: Regulatory focus, optimism, future thinking clarity, goal importance

RESULTS

- No significant effect of EFT on intention to use the DMHI compared to control
  - Both groups showed declining intention over time
- No significant difference in program adherence between groups
  - Both groups showed increased adherence from 14 to 28 days
- Both groups showed significant improvements in well-being, depression, anxiety, and self-efficacy
  - No significant group differences in these outcomes
- No significant moderation effects of regulatory focus, optimism, or future thinking clarity
- Goal importance significantly predicted intention across both groups

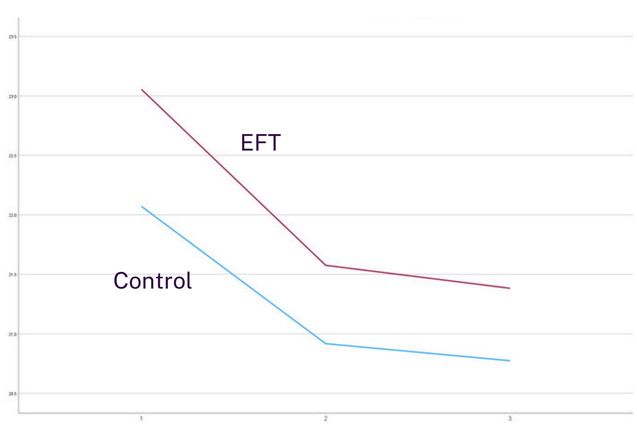
DISCUSSION

- The positive outcomes in both groups confirm the effectiveness of the CBT-based DMHI itself
- EFT as implemented may not be sufficient to increase intention or adherence to DMHIs
- Possible explanations:
  - Self-guided EFT may be less effective than clinician-guided methods
  - Mental health gains are more abstract than concrete outcomes like weight loss
  - EFT might be more effective for behaviors involving proximal reward trade-offs
- Goal importance emerged as a significant predictor of intention regardless of group

Limitations:

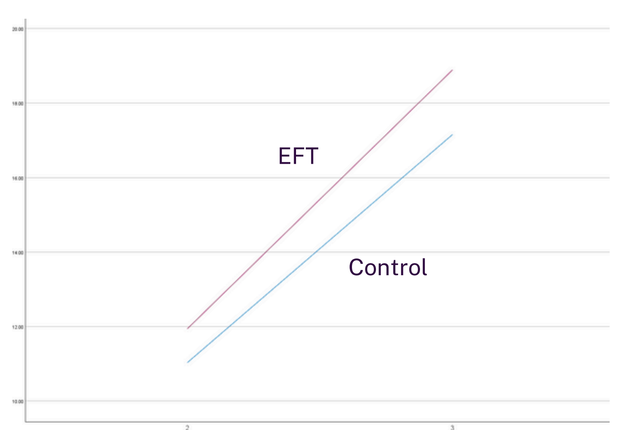
- High attrition (41% dropout at 28 days)
- Self-guided EFT may lack engagement

Intention Over Time Between Groups



EFT group has slightly higher intention but not statistically significant with very small effect size ($\eta^2_p = .001$)

Adherence Over Time Between Groups



EFT group has barely higher adherence but not statistically significant with very small effect size ($\eta^2_p < .001$)

CONCLUSION

- EFT did not significantly improve intention or adherence to this broad-based DMHI
- Goal importance appears to be a key factor in promoting intention to use DMHIs
- Future research should:
  - Apply EFT to DMHIs with more concrete, narrow goals
  - Consider clinician-guided EFT implementation
  - Target mental health behaviors more directly related to delay discounting (e.g., behavioral activation for depression)
  - Explore additional strategies beyond EFT to enhance DMHI engagement

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