

## **Enhancing group lifestyle intervention for depression with ecological momentary assessment: A pilot randomized controlled trial**

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**Statement of the Problem:** To investigate the impact of smartphone-delivered ecological momentary assessment (EMA) as a self-monitoring tool to complement a six week group multicomponent lifestyle medicine (LM) intervention for improving depressive symptoms in an adult Chinese population.

**Methodology and Theoretical Orientation:** Participants with at least a moderate level of depressive symptoms (n = 56) were randomized to the EMA-supported intervention (ELM; n = 18), pure intervention (PLM; n = 20), or care-as-usual (CAU; n = 18) groups. Data were collected at baseline, immediate post-intervention and three month follow-up.

**Findings:** PLM showed large improvements in depressive and insomnia symptoms, physical health-related quality of life (QoL), total lifestyle, nutrition, and stress management at Week seven compared to ELM/CAU, while ELM showed large improvement only in environmental health-related QoL relative to CAU. At Week 19, both intervention groups demonstrated medium to large improvements in various clinical (depressive, anxiety, and insomnia symptoms), psychosocial (physical health, psychological health, and environmental health), and lifestyle (total lifestyle, nutrition, spiritual growth, interpersonal relationship, and stress management) outcomes. However, only ELM showed medium to large improvements in overall QoL, general health, and physical activity compared to PLM/CAU. No significant differences in study attrition and intervention attendance were found between groups. Though ELM had a low EMA compliance rate of 27.1%, it exhibited a higher proportion of full intervention adherence (66.67%) compared to PLM (38.89%), albeit not significantly different.

**Conclusions and Significance:** A group-based, multicomponent LM intervention may be efficacious for managing depressive symptoms, and smartphone-delivered EMA has the potential to improve full intervention adherence. This study warrants a future adequately powered trial to assess the merits of EMA-supported LM interventions for depression.

### **Biography**

Vincent Wing-Hei Wong is currently a PhD candidate in Psychology at The Chinese University of Hong Kong. He received his MPhil degree in Psychology at the same University in 2020. He is an expert in randomized controlled trials and meta-analytic reviews, and has particular interests in lifestyle medicine and low-intensity psychological interventions for common mental disorders. Moreover, he is an International Board Certified Lifestyle Medicine Professional. During his postgraduate research studies, he has authored several international peer-reviewed journal articles on lifestyle medicine for common mental disorders, and has secured more than \$HKD 1.7 million in research grants.

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