

Abstract

Objective: To investigate and compare the effectiveness of self-help integrated lifestyle medicine (LM) intervention delivered by an app and booklet series in improving depression symptoms and wellbeing.

Method: 100 Participants with an elevated level of depressive symptoms, as indicated by a Patient Health Questionnaire-9 score of ≥ 10 , were randomly assigned to an LM app group (AG; n=33), LM booklet group (BG; n=34) or a waitlist control group (WCG; n = 33). The AG were given a LM app with 8 weekly modules, reminder functions, lifestyle-related resources and homework exercises. The BG were given a set of 8 LM booklets with guided exercises and homework exercises. Both intervention groups were given only basic logistical support from the researcher and were instructed to navigate the intervention at their own pace, over an 8-week period. A sensitivity analysis was conducted to evaluate the impact of adherence on mood and wellbeing outcomes. A survey was developed to collect quantitative and qualitative feedback on process evaluation.

Results: At the immediately post-intervention assessments (week 9), the integrated LM intervention delivered by an app did not outperform that delivered by a booklet series, but both delivery modalities are efficacious in alleviating depressive symptoms among individuals with elevated levels of depression (app: $d=0.72$, $p<.01$; booklet: $d=0.60$, $p<.05$). Clinically significant improvement in depression is achieved in the AG ($p<.001$) and BG ($p<.01$) as reflected by having a PHQ-9 score below 10 at week 9.

In the sensitivity and covariance analysis, the AG demonstrated significant improvements compared to the WCG in insomnia ($d = 1.10$, $p<.05$), stress ($d = 0.93$, $p<.05$), health-related quality of life ($d = 0.71$, $p<.01$), mental well-being ($d = 0.52$, $p<.05$) and health-promoting behaviours ($d = 0.76$, $p<.05$). In the sensitivity and covariance analysis, the BG generated significant effects in insomnia ($d = 1.56$, $p<.001$), stress ($d = 1.00$, $p<.01$), and health-promoting behaviours ($d = 1.27$, $p<.001$).

Conclusion: The integrated LM intervention delivered by an app and booklet series did not differ significantly on their effectiveness on depression symptoms, wellbeing, and lifestyle improvements. Both delivery modes are efficacious self-help interventions for mitigating depressive symptoms, offering cost-effective option for depression management.