

Abstract

Lifestyle medicine (LM), a growing evidence-based intervention for common mental health disorders, aim to alter lifestyle-related behaviors for improving or managing both physical and mental well-being and chronic conditions of individuals. Little is known about how the effect of LM intervention would induce a structural change in lifestyle behaviors, depression symptoms, and their interactions and types of change. This study aimed to explore the reorganization of the connections after LM intervention. Participants with at least a moderate level of depressive symptoms ($n=79$), were recruited and randomly assigned to either a waitlist-control group (WLG) or a lifestyle medicine group (LMG) delivered by Lifestyle Hub, a smartphone app with 8 weekly sessions of LM intervention, at a 1:1 ratio. Regardless of the effectiveness of the Lifestyle Hub in depressive symptoms reduction by Wong et al. (2021), the network comparison test revealed an insignificant difference for overall network structure ($M = 0.560$, $p = 0.196$), only 1 edge with significant change, and a non-significant global strength (connectivity) of the networks ($S = -0.460$, $p = 0.705$) between baseline LMG and post LMG network. Network stability test generally reflected an unstable edge accuracy and centrality for interpretation, indicating caution for interpreting the centrality plot and network graphical interpretation. Potential types of change for LM intervention and LM treatment design had been discussed. Further research is recommended for replication of the result and more robust evidence for the reorganizing effect of LM intervention.

Keywords: lifestyle medicine, network analysis, depression, lifestyle behaviors