

### Abstract

Zentangle is a popular relaxation tool that emerged in recent years. We tested the effectiveness of using Zentangle to improve psychological well-being in the general population, and whether Zentangle practice can enhance mindfulness. 38 Hong Kong adults were randomised into the Zentangle (ZEN) group or the waitlist control (WL) group. The ZEN group participated in a 2-hour Zentangle class and was encouraged to practise Zentangle for two weeks.

Both quantitative and qualitative data were collected. Quantitative measures were used to test the effects of Zentangle on positive and negative affect, depression, anxiety and stress symptoms, mindfulness facets, self-compassion and insomnia. Qualitative data regarding participants' emotional experience during Zentangle class were collected from the ZEN group via a focus group interview immediate after class.

Mixed-effects models found significant reductions in the negative affect in the ZEN group compared to the WL group, at both immediate and 2-week post-intervention assessments. Participants who practised Zentangle for more than 80 minutes per week were also found to have a significant reduction in anxiety symptoms and an improvement in self-compassion, compared to the WL group. No significant between-group differences were found in depression and stress symptoms, mindfulness, and insomnia at 2-week post-intervention assessment. Thematic analysis identified four themes of the Zentangle experience: having emotional benefits, being present at the moment, being non-judgemental, improving feelings towards self. Results from this study shed lights on the potential effectiveness and feasibility of using Zentangle in promoting psychological well-being to the general population. The relationship between Zentangle and mindfulness was not confirmed.

*Keywords:* Zentangle, psychological well-being, mental health, mindfulness, randomised controlled trials, thematic analysis