Universal Depression Prevention via Mobile Phones

Abstract

Depressive disorder in adolescence is common, disabling, and heightens the risk of suicide. Universal depression prevention programmes can be effective but are resource intensive and difficult to scale up.

We developed a universal depression prevention programme for adolescents (MEMO) that is delivered solely via their mobile phones. The messages were developed from cognitive behavioural therapy (CBT) by experts in adolescent psychiatry and psychology, delivered within video diary style messages from teenagers, video messages from celebrities, mobisodes (30 second cartoon episodes), text messages and a simple mobile website. Coherence and memorability were provided by a logo, music, and three key words in every message.

We conducted a prospective double-blind randomized controlled trial in adolescents aged 13-17 years from 15 high schools across Auckland, New Zealand. Interested students (n=1348) consented to receive a mobile phone programme about living positively and were randomised (n=855) to either MEMO or a full attention control programme with the same frequency and types of messages. Trained researchers conducted individual interviews with participants at baseline, 9 weeks (post-programme) and 12 months. Students identified with high risk of depression or self-harm at baseline were excluded.

The Child Depression Rating Scale (CDRS-R) mean scores initially improved post-programme (mean change 0.61 [SD 6.29]) then worsened by 12 months. There were no significant differences between MEMO and control groups (mean change from baseline to 12 months -1.18 [SD 6.76] MEMO and -0.92 [SD 6.67] control), even when adjusted for multiple factors and in sensitivity analyses. There were also no differences between groups in self-rated scores of depressive symptoms and general functioning, or in the diagnosis of depression during the study period. We were unable to demonstrate a significant benefit in depression scores in those receiving our intervention compared with a control mobile programme. There are several potential explanations that will be discussed.