

# Can digital positive psychology interventions improve the quality of life in bipolar disorder?

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## Abstract

**Background** Bipolar disorder (BD) is a severe mental illness characterised by recurrent manic, hypomanic and depressive episodes alternating with euthymic periods. The burden of BD is vast, and many patients have unmet needs in their treatment. To better support patients in their personal recovery and well-being, positive psychology interventions (PPIs) have shown to be a promising tool. Recently, a mobile application has been developed to offer PPIs: the WELLBE BD-app. **Aim** The current study was designed to study the acceptability of the WELLBE BD-app and evaluate the feasibility of the design for use in a larger controlled trial (CT). We also studied the potential effects on mental health. **Method** This pilot-study used a mixed-methods quantitative and qualitative approach in which participants were randomly assigned to an intervention- or a treatment-as-usual control group, each with 20 participants with BD. The study sample consisted of a seven weeks during intervention. To assess acceptability, we held semi-structured interviews in the intervention group and collected log data and questionnaire data on the actual use of the app and perceived value of the accompanying exercises. Feasibility was determined by the number of completers of the intervention in both the intervention and control groups. Potential effects on mental health outcomes were measured using an extensive set of pre and post-intervention questionnaires. **Results** The intervention was fully completed by 52.7% ( $n = 11$ ) of the participants and partly completed (1 to 4 modules) by 37.8% ( $n = 8$ ). The post-test response rate was 73% in both groups. On average, the exercises were rated with a value of 7.5 on a scale of 1 to 10 ( $SD = 1.2$ ). Users found the application easy to use, useful for people with BD, and to have an attractive design. Problems with installation, technical problems, and lack of support were barriers to using the app. Guidance by an expert by experience (in videos before the exercises) was preferred by 80% of the participants instead of guidance by a professional. Effects on mental health outcomes were small and statistically non-significant, both between- and within groups. Although we found no significant results in the quantitative part of our study, the qualitative results show that people with BD appreciated the content and design of the intervention. The minimal effects on mental health may be partly explained by the small sample size and the relatively high levels of mental health of the participants at baseline. **Conclusions and Implications for Practice** Based on this study a larger trial on the effects of the WELLBE-app appears feasible and warranted. Next to minor modifications based on this pilot study, to create optimal impact including patients with lower levels of well-being is recommended and the guidance by experts or peers needs to be considered.

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