Preliminary findings of assessing mood through a therapy app

Overvinne

Authors

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Abstract

In order to reach more patients at an earlier point in their development of psychological disorders, digital interventions have been proposed as a possible solution. This study aimed to investigate the effect of a digital treatment app on subjective mood assessments. A total of 97 participants and 4285 submissions were included in the study. Our findings indicated that positive affect significantly increased during app usage (r = .29). This study aligns with previous research, suggesting that easily accessible digital interventions can promote valuable outcomes for individuals seeking help for psychological concerns. However, this preliminary study is limited by the need for demographic data and uncontrolled naturalistic design.
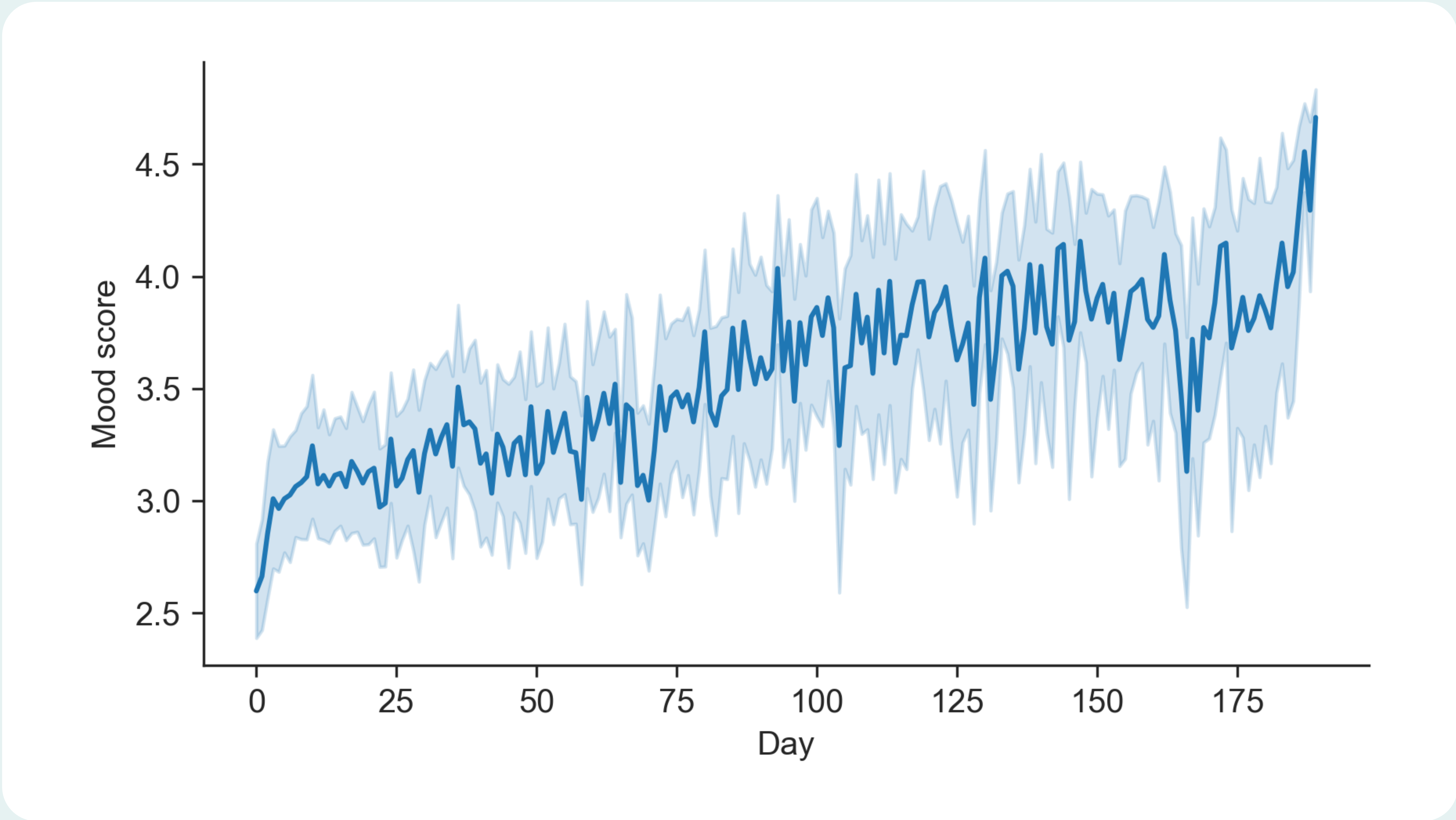
Fig. 1. Daily mood assessment rated on a 7 point scale (0 - 6). A significant regression model was found $F(1, 4283) = 385.62$, $p < .001$, with an R2 of 0.08. The two variables were significantly correlated $r(97) = .29$, $p < .001$.

Table 1

Mood assessment score, submissions and drop-off

Day	Mean score	SD	Submissions	n(%)
0	2,59	1,04	97	97 (100%)
1 - 29	3,06	0,99	1289	97 (100%)
30 - 59	3,26	1,04	993	97 (100%)
60 - 89	3,39	0,96	715	97 (100%)
90 - 119	3,72	1,02	545	57 (59%)
120 - 149	3,82	0,87	343	38 (39%)
150 - 180	3,80	0,85	280	19 (20%)

Note. After day 180 there was an additional 46 submissions with day 189 being the last day of registered submissions.

Introduction

While effective treatments exist for common psychological disorders, access to treatment is generally not readily available. Providing easily accessible treatment through digital tools has been proposed as a solution for reaching more patients at an earlier stage of developing psychological disorders (Muñoz et al., 2021). In order to develop these tools, researchers must find suitable methods for digital treatment that are safe and effective.

Methods

The therapy app "Overvinne" provided assessments of affect consciousness based on Jon Monsen's affect integration theory (Solbakken et al., 2011) as an integrated part of the treatment program. The participants rated five affects and "perceived control" on a 7 point scale (0 - 6) as part of a daily routine during treatment . The app also contains a treatment program based on Transdiagnostic treatment (Farchione et al., 2012) and access to digital consultations with a licensed therapist.

The inclusion criteria for participants were at least one submission after day 60 and eight or more total submissions. These criteria ensured that all participants used the app for at least two months. After exclusion, our dataset contained 97 participants and 4285 total submissions. No demographic data was available from this convenience sample. Thus this represents a routine evaluation study that does not require registration with the Regional Committee for Medical Research.

Results

The mean day for submitted mood assessments was day 62.6 (*SD* = 49, Median = 52), and the mean number of submitted mood assessments was 44.2 individual days. Over 50% of participants had over three months of submitted mood assessment (Table 1).

A simple linear regression was calculated to predict the mean mood assessment score over days of submitted mood assessments. A significant regression model was found $F(1, 4283) = 385.62$, $p < .001$, with an R^2 of 0.08. The two variables were significantly correlated $r(97) = .29$, $p < .001$. (Fig. 1)

Discussion

We found that the overall level of assessed positive affect significantly increased during app usage. According to Jon Monsen's model, these results indicate higher levels of emotional integration, which relates to higher levels of psychological functioning.

The effect sizes found in this study are as large as most findings in psychological treatment studies. A correlation of around r = .28 is usually found between measures of a positive therapeutic alliance and a positive treatment outcome. This correlation is considered the most significant predictor of treatment outcomes currently available (Horvath et al., 2011).

Therefore this study provides preliminary but encouraging evidence for the effectiveness of the Overvinne app.

Limitations

While this study data did not access usage of other aspects of the app, such as the treatment program or digital consultations with a certified therapist, the mood assessment data gives preliminary information on the general utility of this digital psychological intervention. There were no measures of the demographic characteristics of the app users. However, the great majority are well-educated, resourceful employees who received access to the app through health insurance provided by their employers. Future research should address both of these limitations.

Conclusion

This uncontrolled naturalistic study aligns with previous studies, finding that easily accessible digital interventions can promote valuable outcomes for patients seeking help for psychological concerns. Jon Monsen's model of emotional integration is a promising avenue for further developing digital tools. Future research should investigate how the mood assessment model might be used in safe and effective digital treatments.

References

Farchione, T. J., Fairholme, C. P., Ellard, K. K., Boisseau, C. L., Thompson-Hollands, J., Carl, J. R., Gallagher, M. W., & Barlow, D. H. (2012). Unified Protocol for Transdiagnostic Treatment of Emotional Disorders: A Randomized Controlled Trial. Behavior Therapy, 43(3), 666–678. https://doi.org/10.1016/j.beth.2012.01.001

Horvath, A. O., Del Re, A. C., Flückiger, C., & Symonds, D. (2011). Alliance in individual psychotherapy. Psychotherapy, 48(1), 9–16. https://doi.org/10.1037/a0022186

Muñoz, R. F., Pineda, B. S., Barrera, A. Z., Bunge, E., & Leykin, Y. (2021). Digital Tools for Prevention and Treatment of Depression: Lessons from the Institute for International Internet Interventions for Health. Clínica y Salud, 32(1), 37–40. https://doi.org/10.5093/clysa2021a2

Solbakken, O. A., Hansen, R. S., Havik, O. E., & Monsen, J. T. (2011). Assessment of Affect Integration: Validation of the Affect Consciousness Construct. Journal of Personality Assessment, 93(3), 257–265. https://doi.org/10.1080/00223891.2011.558874

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