

App-supported Intervention for Digital Aftercare to Bridge Long Waiting Periods between Inpatient and Outpatient Treatment of Depression

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Background



Given the elevated risk of relapse following the completion of acute inpatient depression treatment until remission, the guidelines advise the use of maintenance therapy or continuation over several months, with a focus on relapse prevention [1]. Digital health technologies can facilitate support for patients at the vulnerable interface when changing from partial inpatient treatment to further outpatient treatment, thereby contributing to a successful transition between healthcare sectors [2].

Accordingly, an app-supported intervention was examined. The app was utilized as a communication platform for this purpose. A distinguishing aspect of this approach is the additional psychotherapeutic assistance provided to patients via the app by their therapists after they have been discharged from the day clinic.

Methods and sample



In a non-randomised, controlled longitudinal study, male patients ($n = 27$, σ 100 %) following day clinic treatment are given 8 weeks of aftercare treatment, either in a once-weekly aftercare group (TAU, CG) or digitally using app-supported intervention (IG). The severity of depressive symptoms is measured using the BDI-II and quality of life using the WHOQOL-BREF. Data are collected over four time points: at the start of the day clinic (t_1), at the end of the day clinic (t_2), eight weeks after the end of the day clinic (t_3), and 20 weeks after the day clinic (t_4).

Table 1: Description of sample.

Characteristics	IG (n = 16)	CG (n = 11)	p
Age M (SD)	38,88 (2,91)	53,64 (1,95)	0.003 *** ¹
Diagnosis	F32.1	5 (31 %)	2 (18 %) ²
	F32.2	1 (6 %)	1 (9 %)
	F33.1	7 (44 %)	8 (73 %)
	F33.2	3 (19 %)	0 (0 %)

¹ Mann-Whitney U-Test; ² cell frequencies < 5, prerequisite for χ^2 not fulfilled; ** p > .01

Results



The inferential statistical data analysis was conducted using a mixed-ANOVA with repeated measures. In order to highlight key results for long-term stabilisation during the waiting times, statistically significant differences are only reported if they occur between t_2 and t_4 .

There was no statistically significant interaction between time and group of **BDI-scores** (Greenhouse-Geisser $F(2.696, 67.379) = 0.386$, $p = 0.742$, partial $\eta^2 = .15$, generalised $\eta^2 = 0.007$).

Moreover, the analysis revealed that there were no statistically significant differences between t_2 and t_4 , controlling for group and time.

Chart 1: BDI-II Scores M IG & CG.

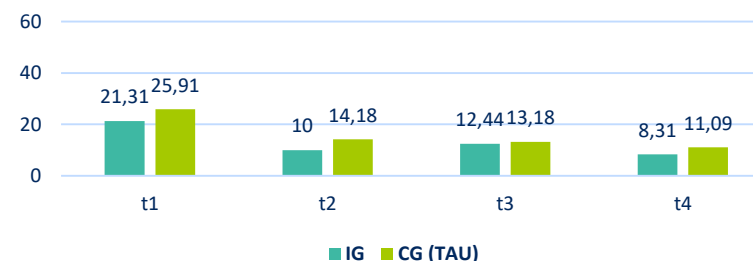
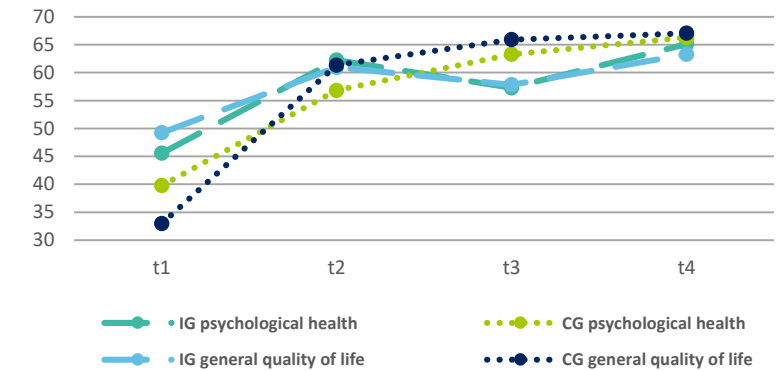


Chart 2: WHOQOL-BREF (0-100) M IG & CG.



There was no statistically significant interaction between time and group of **psychological health** (Greenhouse-Geisser $F(2.770, 69.261) = 1.145$, $p = 0.335$, partial $\eta^2 = .044$, generalised $\eta^2 = 0.021$) and no statistically significant differences between t_2 and t_4 , controlling for group and time.

There is a statistically significant interaction between time and group of **general quality of life** (Greenhouse-Geisser $F(2.599, 64.978) = 4.789$, $p = 0.006$, partial $\eta^2 = .16$, generalised $\eta^2 = 0.080$), only in CG but not between t_2 and t_4 .

Conclusions



The results suggest that depressive symptoms, general quality of life and psychological health could have a similarly stabilizing effect as TAU. The treatment effect of app-supported intervention is therefore comparable to that of TAU for bridging waiting times. In view of the limited quantity of cases reported thus far, there exists a clear necessity for additional data to be collected and analysed.

