RESEARCH

Effectiveness of iFightDepression® online guided self-help tool in depression – A pilot study

Journal of Telemedicine and Telecare
1–10

DOI: 10.1177/1357633X221084584
journals.sagepub.com/home/jtt
SAGE

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Abstract

Background: Depression is one of the leading causes of human misery and disability worldwide. For those fortunate enough to have access to the rapidly expanding World Wide Web, online self-help tools can guide those suffering from depression, with or without professional intervention, to better manage their symptoms and maintain some measure of self-actualization. This study assesses the efficacy of the widely used, online self-help tool, iFightDepression®.

Methods: A six-week, observational study was conducted with 143 participants (29.4% men, mean age: 37.8; standard deviation [*SD*] = 12.05, range = 18–70, years) in three intervention groups, as follows: 1) Treatment As Usual (TAU), 2) TAU combined with access to the iFightDepression® tool (TAU + iFD®), 3) TAU combined with iFightDepression® and weekly phone support (TAU + iFD® + phone). Depression symptoms were measured pre- and post- by Patient Health Questionnaire-9.

Results: There was a significantly greater decrease of depressive symptoms in both iFD® groups compared to the TAU group (time × group interaction: $F(2) = 34.657$, $p < 0.001$, partial $\eta^2 = 0.331$). The reliable change index calculation identified one participant (0.7%) as having experienced a statistically reliable deterioration in depression. A total of 102 participants (71.3%) showed no reliable change, while 40 participants (28.0%) showed a statistically reliable improvement. Multiple binary logistic regression analysis found odds of reliable improvement to be significantly higher in both iFD® groups compared to the TAU group (TAU + iFD®: OR = 18.52, $p = 0.015$, TAU + iFD® + Phone: OR = 126.72, $p < 0.001$). Participants living in Budapest were found to have significantly higher odds for a reliable improvement compared to those living in the countryside (odds ratio [OR] = 4.04, $p = 0.023$). Finally, higher levels of depressive symptoms at baseline (pretest) were also associated with increased odds for post-intervention improvement (OR = 1.58, $p < 0.001$). The variance explained by the model is 62.0%. With regards to the iFD® self-help program, the mean of completed modules was 4.8 (*SD* = 1.73, range = 1–6). Participants in the group supported by weekly phone calls completed significantly more modules ($n = 50$, $M = 5.7$, $SD = 0.76$) than participants without weekly telephone support ($n = 52$, $M = 3.9$, $SD = 1.94$, $Z = 5.253$, $p < 0.001$). However, there was no significant difference in the number of completed modules between respondents with a reliable improvement in depression ($n = 39$, $M = 4.9$, $SD = 1.57$) and those without a reliable change ($n = 63$, $M = 4.7$, $SD = 1.83$, $Z = 0.343$, $p = 0.731$).

Conclusion: Our results confirm previous findings regarding the efficacy of web-based interventions with the low-intensity guidance of mental health professional. Findings suggest that a relatively short additional weekly call may result in a significant decrease in depressive symptoms and higher number of completed iFD® modules. The study confirms that the IFD® tool, both alone and with additional phone support, is a possible and effective way to help patients with mild to moderate and, in some cases, even severe depression. Providing mental and primary health care systems with the availability of online self-help tools may contribute to the efficacious treatment of depression and prevention of the increase in depressive symptoms.

Keywords

depression, internet-based cognitive behaviour therapy, online self-help, iFightDepression, telehealth

Date received: 23 September 2021; Date accepted: 24 January 2022

Introduction

Depression is considered to be the single largest cause of global disability with a worldwide pooled prevalence of 4.4%.[1] The presence of depression in people with chronic

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physical conditions is even higher,[2] which represents a significant burden in healthcare costs, impaired functioning and mortality.[3] Moreover, depression is associated with a range of adverse consequences, among them, suicide,[4] increased risk of physical disorders and mortality[5] which, all told, create an increased economic burden.[6]

Major depression is generally preceded by mild to moderate symptoms that signal the need for evaluation and treatment before they become more seriously debilitating. The first-line treatment for depression is often pharmacotherapy and/or psychotherapy.[7,8] Castro et al.[7] found that both can be equally efficient. According to McHugh et al.,[9] however, most patients favour psychotherapy prior to pharmacotherapy. If first treated with medication, patients suffering from depression tend to discontinue their pharmacotherapy after their symptoms have somewhat reduced. That often leads to relapse which inclines patients to look to psychotherapy for their solutions.[10]

At the same time, due to the limited budget for mental health services and infrastructure, as well as a generally low availability of mental health professionals, the percentage of non-treated patients with depressive symptoms remains high.[11,12] Moreover, barriers to treatment such as the stigma associated with it, travelling time, waiting lists and delays also apply to the treatment of depression.[13] Although the Covid-19 pandemic has had a major negative effect on people's mental health,[14] it also has disrupted access to mental health services worldwide, thus creating a sudden and unexpected gap in care for this most vulnerable population of psychiatric patients.

Web-based interventions show great promise in bridging this treatment gap.[15] Internet services are easy to access; the relevant apps and tools are available at all hours and can be used from home. Consequently, online interventions have become a realistic alternative for psychotherapy, both reaching more people and maintaining quality service.[16]

Literature reveals that guided online interventions have higher retention rates and are more effective than programs without professional guidance.[17] As low-intensity interventions, guided, online self-help treatments for depression are increasing, both in number and effectiveness.[18–21]

Cognitive behaviour therapy (CBT), for example, is one of the most clinically efficacious, evidence-based treatments for depression and, over the long term, seems to be cost-effective compared with pharmacotherapy.[22,23] The computerized version of CBT is also regarded as both evidence-based and as an equally effective treatment for depression.[24–27] Research has shown that professionally guided, online, self-help tools produce more significant results than those used without professional guidance.[28,29]

A recent meta-analysis of the effectiveness of computerized CBT concluded that it is as effective as therapist-led CBT in treating depression and anxiety disorders.[25] These findings may be particularly significant for people living in rural areas where mental health care providers are scarce.[30] A study confirms that computerized CBT interventions, compared to in-person mental health treatments, have the equal potential for affordability, accessibility and privacy in rural areas as well.[31] Moreover, computerized CBT may be more acceptable to residents of rural areas than to urban participants.[32] These results confirm that there may be differences in usage and even effectiveness of online self-help tools in rural versus urban areas. According to findings of Karyotaki et al.,[23] in regards of web-based interventions, lower level of education, being male and younger age can be a risk for dropout. A lower educational background may create barrier in understanding the intervention content and abilities to use information technology may be also limited that diminishes the motivation to use online self-help tools. In contradiction to findings that younger age was related to dropout risk, previous research indicates that younger individuals had higher adherence to online self-help interventions.[33]

The iFightDepression® (iFD®) tool, created by the European Alliance Against Depression, is a guided, online, self-help program for people suffering from mild to moderate depression. The tool is designed to be used on any device with web access. It is based on CBT techniques and consists of six core modules as follows: 1. Relationship between thinking, feeling and behaviour; 2. Sleep and depression; 3. Planning and doing enjoyable things; 4. Getting things done (behavioral activation); 5. Identifying negative thoughts; and 6. Changing negative thoughts (Figures 1 and 2).

In the version of the tool designed for youth (under the age of 15), there are two more optional components: 7. Healthy Lifestyle and 8. Social anxiety.

Each module consists of a short, psychoeducational introduction to its topic and worksheets that elaborate the subject in practice. The user is encouraged to complete the modules at a rate of one per week, with an estimate of 30–40 min for the completion of each. According to the iFightDepression® protocol, the intervention lasts for six weeks during which one-on-one professional help is provided in person every two weeks.[34]

Hegerl and Oehler[35] confirm the significant effect of professional guidance in patients' use of web-based interventions, especially when followed by telephone support.[36]

There is evidence that participants who completed fewer modules in an online CBT intervention had larger odds of dropout and better treatment outcome was associated with more logins.[37,38]

The aim of this study was to examine the effectiveness of the iFightDepression® guided online self-help tool with additional weekly phone call support versus no extra weekly support and treatment as usual (TAU). One group of patients received only their own TAU; a second group of patients received both their own TAU and iFD®; and a third group of patients received their own TAU and iFD® additional weekly professional phone support. Our hypotheses were: At the end of the six week treatment period:

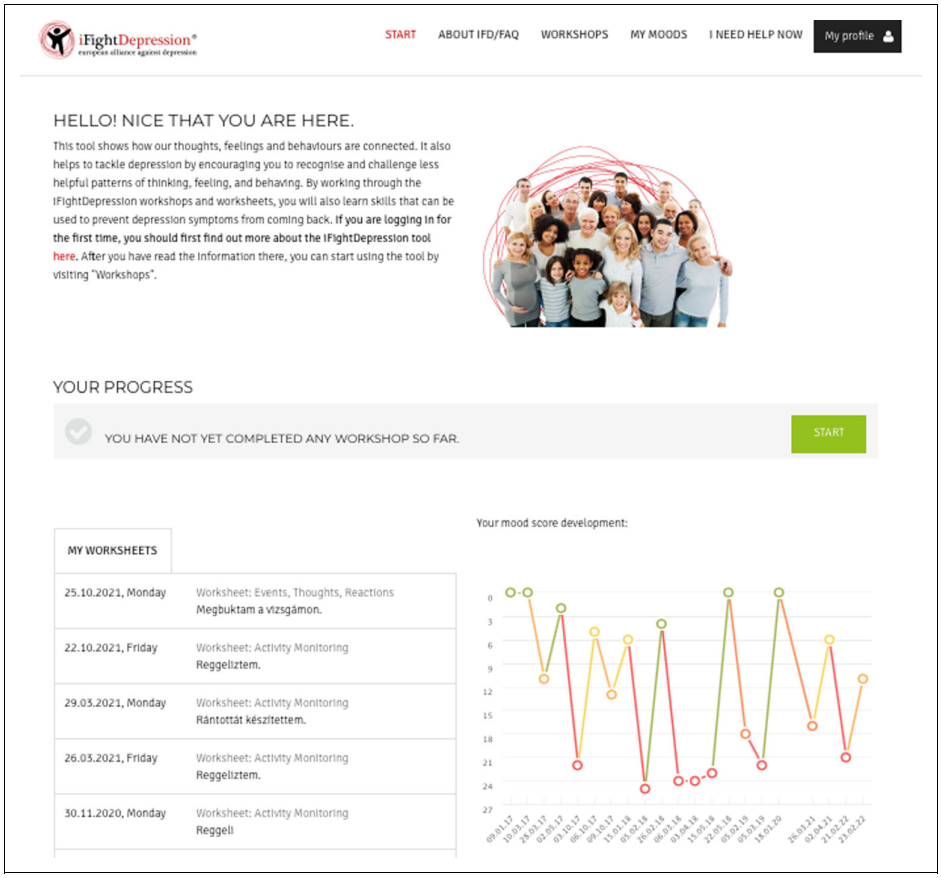

Figure 1. The iFightDepression® tool homepage.

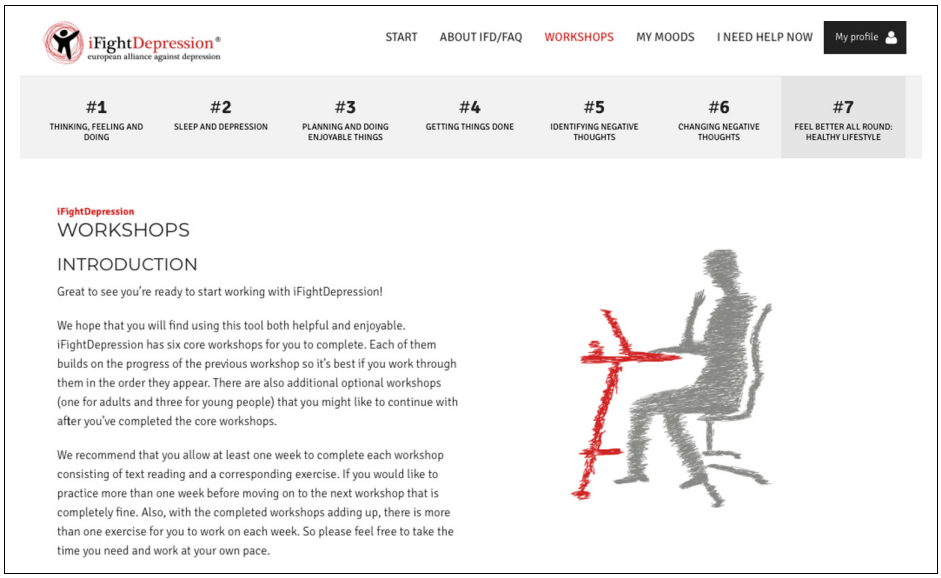

Figure 2. List of iFightDepression® modules on the tool website.

1) Patients in group three who received additional weekly phone support (TAU + iFD® + Phone) will report a more significant reduction of their depression than patients in either of the other two groups (TAU + iFD® or TAU alone); 2) Patients in group three who received additional weekly phone support (TAU + iFD® + Phone) will have completed more iFD® modules than patients in TAU + iFD® group.

Method

Participants and procedure

A total of 163 participants were recruited in psychiatric outpatient and primary care facilities throughout Hungary. In order to use the iFightDepression® online self-management tool, participants were recruited and trained in its use by licensed health care professionals - general practitioners, psychiatrists, clinical psychologists and psychotherapists. Prior to training the participants in accordance with the study protocol, the health care professional/recruiters, themselves, completed a standardized, 3-h training workshop that focused on tool implementation and patient guidance. The accredited training was provided by the members of the Hungarian iFightDepression® team: a psychiatrist (GyP), a counselling psychologist (MDT) and a clinical psychologist (AV).

Baseline and study follow-up (pre- and post-) assessments were completed by clinicians who originally provided mental health care for the patients. Trained health care professionals were instructed to initially assess their patients' levels of depression for eligibility to use the iFD® tool. Inclusion criteria were: diagnosis of mild to moderately severe depression based on DSM-5 and measured by PHQ-9 (>4 scores), at least 18 years of age, and having internet-access. The exclusion criteria included acute, severe suicidal ideations, active substance abuse, a history of severe self-harm, acute psychotic episodes and a diagnosis of bipolar disorder.

As patients started using the online self-help tool, clinicians provided guidance, as needed, in regular meetings with them for 15–20 min every second week during the six-week intervention. Data collection was performed before and after six weeks of intervention.

Of the initial 163 participants, 11 were excluded for not having scored the required minimum of 4 on the PHQ-9. One participant whose PHQ-9 questionnaire lacked an answer on the fifth item on both measurement points was excluded, as well. Seven other participants were excluded who were not in treatment for depression at the beginning of the study. Finally, there was a patient who, although depressed, participated only in a non-conventional treatment (art therapy) at the beginning of the study. Thus, the final sample size was reduced to 143 participants.

Of all patients 29.4% ($n = 42$) were men, and the mean age was 37.8 years ($SD = 10.05$ years, range = 18–70 years). 2.8% of responders had elementary educational qualification; 46.9% of them had upper secondary education; and 49.7% of participants had completed higher education (missing data: 1 person [0.7%]). Nearly half of respondents (48.3%) lived in the capital city (Budapest, Hungary), while 51.7% lived in the rural area (city: 43.4%, town: 8.4%).

Forming intervention groups of the current observational study was as follows: In the recruitment process, the mental health professionals (psychiatrists and clinical psychologists) offered the access to iFD® self-help tool to every patient of theirs. Those, who refused the use of the iFD® tool, but willing to participate in the study, were put in the (1) TAU intervention group ($n = 41$, 28.7%). Those participants who were open to use the iFD® online self-help tool were assigned by simple randomization to one of the following groups: (2) TAU combined with access to the iFightDepression® tool (TAU + iFD®; $n = 52$, 36.4%); (3) TAU combined with iFightDepression® plus weekly phone-call support (TAU + iFD® + phone; $n = 50$, 35.0%).

Treatment as usual in all three groups meant either pharmacotherapy or psychotherapy or both simultaneously. The treatment protocol of all three groups lasted for six weeks. Weekly support phone calls were delivered by a trained clinical psychologist and cognitive behaviour therapist (AV), who was part of the research group. The weekly calls from clinician were limited mainly to answering participant questions regarding the iFD® protocol and guiding the patients in the use of cognitive behavioural techniques presented in the iFD® tool. The length of calls was 20–25 min.

The PHQ-9 questionnaire was completed at baseline and after the six-week intervention period, either in person or online depending on the availability of the patient. In some cases, participants required more than six weeks to complete the iFD® tool, but the follow-up measurement was taken not later than eight weeks from the beginning of the protocol. The online self-help tool also registered the number of completed modules for each patient.

Measures

Sociodemographic data. Participants were identified by gender, age, place of residence and level of education.

Number of completed modules. The iFD® tool consists of six core modules. The number completed by each participant is registered automatically by the iFD® program.

Patient Health Questionnaire-9 (PHQ-9).[39] The nine item self-report questionnaire is a multipurpose instrument for measuring the severity of depression. It is the most commonly used, self-administered screening tool for severity of depression in primary care.[40,41] Items of PHQ-9 represent symptoms of depression as defined both by DSM-IV and DSM-5.[42] Respondents rate on a four-point Likert-type scale (from 'not at all' [0] to 'nearly every day' [3]) how often they have experienced each problem in the past two

weeks. PHQ-9 scores of 5, 10, 15, and 20 represent mild, moderate, moderately severe and severe depression. In the present sample, internal consistency of the scale on both measure points was acceptable (Cronbach α: 1st measure: 0.719; 2nd measure: 0.800).

Statistical analysis

Internal consistency of PHQ-9 was estimated by Cronbach α calculation. To compare the three groups, chi-square tests, one-way analysis of variance (ANOVA) and Kruskal–Wallis test were applied. The two iFD® groups were compared using the Mann–Whitney *U* test change in depression measured by PHQ-9 was examined by a two-way mixed-design ANOVA. For significant time × group interaction, further analyses were used to examine predictors of change in depression symptoms. The first calculation produced a Reliable Change Index[1] (RCI)[43] for each participant's response to PHQ-9. A change is considered reliable – or unlikely to be the product of measurement error – if the absolute value of RCI is greater than 1.96. More precisely, when the individual has a change score greater than |1.96|, it can be reasonably assumed that the individual has either improved or deteriorated with regard to depression. Predictors of reliable improvement in depression were tested with multiple binary logistic regression analysis (Enter Method). Group assignments (i.e. type of intervention) were treated as dummy variables. Data analysis was performed by SPSS 21.0 and ROPstat[44] statistical program packages.

Results

Comparing groups at baseline

The three intervention groups did not differ significantly in terms of their sociodemographic variable, and at baseline, there was no significant difference between groups with regards to depression. Nevertheless, a significant difference was shown in different types of treatment. Pharmacotherapy by itself was the most frequent in the TAU group, whereas psychotherapy by itself was the most frequent in the TAU + IFD® + Phone intervention group (Table 1).

In point of levels of depression, a two-way mixed-design ANOVA was used to compare the means of all three groups at both measurement times. The results showed that the main effect of group ($F(2) = 6.236$, $p = 0.003$, partial $\eta^2 = 0.082$), main effect of time ($F(1) = 124.646$, $p < 0.001$, partial $\eta^2 = 0.471$) and the time × group interaction ($F(2) = 34.657$, $p < 0.001$, partial $\eta^2 = 0.331$) were significant in relation to depressive symptoms. The means shown in Figure 3 illustrate the outcomes of three different interventions. Although depression was essentially unchanged in the TAU group, it significantly decreased in the two iFD® groups.

Predictors of improvement in depressive symptoms

As a result of the RCI calculation, one participant (0.7%) showed a statistically reliable deterioration in depression, 102 participants (71.3%) showed no reliable change,

Table 1. Comparison of groups at baseline.

Variables		Total sample	TAU ($n = 41$)	TAU + iFD® ($n = 52$)	TAU + iFD® + Phone ($n = 50$)	Comparison of groups
Gender, *n* (%)	Male	42 (29.4%)	11 (26.8%)	11 (21.2%)	20 (40.0%)	$\chi^2(2) = 4.543$
	Female	101 (70.6%)	30 (73.2%)	41 (78.8%)	30 (60.0%)	($p = 0.103$)
Age (years) *M* (*SD*)		37.8 (12.05)	40.2 (13.41)	35.9 (11.13)	37.9 (11.68)	$F(2) = 1.475$ ($p = 0.232$)
Education, *n* (%)	Up to medium level	71 (50.0%)	21 (52.5%)	29 (55.8%)	21 (42.0%)	$\chi^2(2) = 2.072$ ($p = 0.355$)
	High level	71 (50.0%)	19 (47.5%)	23 (44.2%)	29 (58.0%)	
Place of residence, *n* (%)	Capital	69 (48.3%)	18 (43.9%)	25 (48.1%)	26 (52.0%)	$\chi^2(2) = 0.593$
	Countryside	74 (51.7%)	23 (56.1%)	27 (51.9%)	24 (48.0%)	($p = 0.744$)
Depression (PHQ-9), *M* (*SD*)		13.2 (4.53)	12.3 (4.30)	14.3 (4.91)	12.9 (4.16)	$F(2) = 2.344$, $p = 0.100$
Severity of depression (PHQ-9), *n* (%)	Mild	31 (21.7)	12 (29.3)	7 (13.5)	12 (24.0)	$\chi^2(6) = 9.713$
	Moderate	63 (44.1)	15 (36.6)	26 (50.0)	22 (44.0)	($p = 0.137$)
	Moderately severe	33 (23.1)	11 (26.8)	9 (17.3)	13 (26.0)	
	Severe	16 (11.2)	3 (7.3)	10 (19.2)	3 (6.0)	
Treatment	Pharmacotherapy	63 (44.1)	26 (63.4)	23 (44.2)	14 (28.0)	$\chi^2(4) = 12.701$
	Psychotherapy	49 (34.3)	7 (17.1)	19 (36.5)	23 (46.0)	($p = 0.013$)
	Both	31 (21.7)	8 (19.5)	10 (19.2)	13 (26.0)	

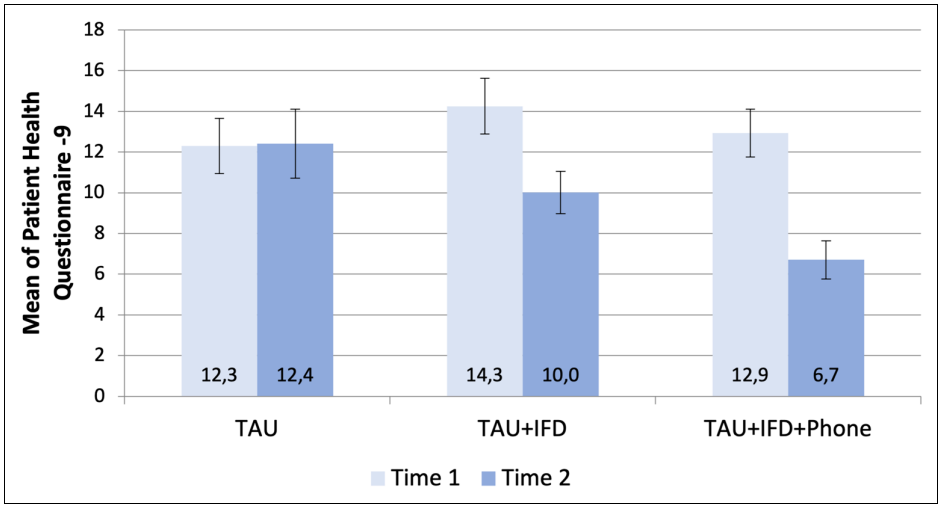

Figure 3. Changes in symptoms of depression in two measurement points in all three groups.
Note: Error bars represent the 95% confidence interval.

Table 2. Predictors of reliable improvement in depression (multiple binary logistic regression analysis).

							95% C.I. for OR	
Independent variables	B	S.E.	Wald	df	*p*	OR	Lower	Upper
TAU + iFD® (ref.: TAU)	2.919	1.199	5.926	1	0.015	**18.52**	1.77	194.14
TAU + iFD® + Phone (ref.: TAU)	4.842	1.250	15.011	1	<0.001	**126.72**	10.94	1467.71
Treatment (ref.: solely psychotherapy or pharmacotherapy)	−1.019	0.663	2.363	1	0.124	0.36	0.10	1.32
Gender (ref.: male)	−0.073	0.615	0.014	1	0.905	0.93	0.28	3.10
Age	−0.021	0.025	0.753	1	0.386	0.98	0.93	1.03
Education (ref.: up to secondary school)	0.556	0.575	0.936	1	0.333	1.74	0.57	5.38
Place of residence (ref.: countryside)	1.396	0.612	5.204	1	0.023	**4.04**	1.22	13.40
Depression (PHQ-9, Time 1)	0.460	0.095	23.655	1	<0.001	**1.58**	1.32	1.91
Constant	−10.768	2.525	18.181	1	<0.001	0.00		

Note. $n = 141$, PHQ-9 = Patient Health Questionnaire-9, C.I. = confidence interval, OR = odds ratio, TAU = treatment as usual, Nagelkerke $R^2 = 0.620$.

while 40 participants (28.0%) showed a statistically reliable improvement. With regards to depression, a reliable change was detected in all of the intervention groups: 2.5% ($n = 1$) of the TAU group, 28.8% ($n = 15$) of the TAU + iFD group and 48.0% ($n = 24$) of the TAU + iFD + Phone group. The incidence rate of reliable change differs significantly in the three groups ($\chi^2(2) = 22.755$, $p < 0.001$).

Predictors of reliable improvement in depression were tested with multiple binary logistic regression analysis. The only respondent who showed a reliable deterioration was excluded (inclusion would have had a distorting effect on results). Two dummy variables were created from the group assignment variable, i.e. type of intervention. The predictive power of the type of treatment (solely pharmacotherapy, psychotherapy or both simultaneously) and the four sociodemographic variables (age, gender, level of education and place of residence) was tested. The model was adjusted for depression measured at baseline.

Results showed that the odds of statistically reliable improvement were significantly higher in both iFD® groups compared to the TAU group (TAU + IFD®: odds ratio [OR] = 18.52, $p = 0.015$; TAU + IFD® + Phone: OR = 126.72, $p < 0001$). Participants living in the capital city also had significantly higher odds for a reliable improvement compared to those living in the rural area (OR = 4.04, $p = 0.023$). Higher levels of depressive symptoms at baseline were also associated with an increased odds of reliable improvement (OR = 1.58, $p < 0.001$). Omnibus test of model coefficients was significant ($\chi^2(8) = 79.713$, $p < 0.001$). The variance explained by the model (Nagelkerke R^2) is 62.0% (Tables 2 and 3).

Results obtained using the iFD® tool

The mean of completed modules was 4.8 ($SD = 1.73$, range = 1–6) among respondents ($n = 102$) who participated in the iFD® self-help program. Participants supported by weekly

Table 3. Classification table of multiple binary logistic regression analysis.

			Predicted		
			Reliable improvement		
Observed			No	Yes	Percentage correct
Step 1	Reliable improvement	No	94	7	93.1
		Yes	12	28	70.0
	Overall percentage				86.5

Note: The cut value is 0.500.

phone calls completed significantly more modules ($n = 50$, $M = 5.7$, $SD = 0.76$) than members of the group not receiving phone support ($n = 52$, $M = 3.9$, $SD = 1.94$, $Z = 5.253$, $p < 0.001$). However, there was no significant difference in the number of completed modules between participants with a reliable improvement in depression ($n = 39$, $M = 4.9$, $SD = 1.57$) and those without a reliable change ($n = 63$, $M = 4.7$, $SD = 1.83$, $Z = 0.343$, $p = 0.731$).

Discussion

This observational study explored the effectiveness of the iFightDepression® guided self-help tool, comparing professional guidance by protocol (every other week) with additional weekly phone call support, and each of these in comparison to a TAU control group. We also examined the impact of sociodemographic variables on reliable improvement in depressive symptoms in all three intervention groups.

The main finding of the current analysis is that although symptoms of depression decreased in both iFD® intervention groups after six weeks of intervention, the symptom reduction was superior in the two iFD® + phone call intervention group. Moreover, the group that had additional weekly phone call support during their iFD® intervention showed more significant decreases in depression symptoms than the iFD® group that did not receive additional phone support.

A greater odds for statistically reliable improvement of depression was detected in participants living in the capital, compared to the rural area, which is in line with previous findings.[32] Also, worth mentioning that in both iFD® groups, the higher the level of participants' depression recorded at the beginning of the study, the greater their recorded improvement was at the end. This finding supports previous research data where greater baseline depression symptom severity was associated with higher response to internet-based CBT.[38,45] Although there are also data for the contrary, where lower baseline rates of depression correlated with higher adherence.[33,37]

Significantly more iFD® modules were completed by patients receiving extra phone support in comparison to the iFD® group without weekly phone calls. The results of this study confirm previous findings about the efficacy of web-based interventions with adequate guidance provided by a mental health professional.[35] This study showed that individuals taking part in the iFD® guided self-help program, had higher rates of symptom improvement. Hence, our findings support the grounds for guided, internet-based CBT that may be an effective complementary tool for reducing depression symptom severity.

The study found no significant changes in the level of depression in the TAU group. One possible explanation may be that a six-week period is too short for conventional treatments to achieve significant improvement. Conventional psychotherapies are often characterized as having relatively slow response times and a considerable rate of non-responders.[46]

Although a previous study by Gilbody et al.[47] found no significant effect of weekly phone call support in computerized CBT, the present study has identified several positive consequences of its weekly calls. Additional calls are associated with 126 times higher odds in reaching a reliable improvement in depression and also with a significantly higher number of completed iFD® modules probably due to the increased motivation of the patients. In the present study the weekly phone call was delivered by a clinical psychologist (not known by the patients) trained in psychotherapy and CBT which probably enhance support skills. However, in another recent study[36] well-trained mental health providers other than clinical psychologists produced the same significant effects. It implies that it may be efficacious to broaden the circle of professionals who are prone to provide additional brief phone-call support in a guided online CBT protocol.

Results regarding significantly higher odds of statistically reliable improvement in depression among participants living in the capital city in comparison to those from a rural area are in alignment with several findings that suggest that cities have more mental healthcare providers accessible to residents than rural areas.[31,32] Collectively, these findings may indicate that recovery is enhanced by city dwellers' easier access to information, braver use of mental health tools and lower concern about social discrimination for using them.

Limitations

Including different types of TAU into the intervention groups (pharmacotherapy, psychotherapy, or both) may

be a limitation such as they may have very different effects. The exact types of medication and psychotherapy were not factored into the study, nor was the length of either type of intervention.

The number of participants in this study was low that may have a distorting effect on outcome results. Further study of examining the effectiveness of the iFD® tool is necessary to confirm current results. A six-month follow-up would have been also an important part of the research, to further test the lasting effects of symptom improvement. It would have been informative as well, if the weekly phone call details had been noted more specifically, for example, what questions were discussed and what kind of help did patients most want or need. To enhance the efficacy of the tool, further studies could usefully pursue qualitative data on patients' subjective experiences, needs or reactions to their use of the iFD®. Future studies might also fruitfully involve semi-professional phone-callers to see whether the nature, quality or source of professional support has an impact on reducing participant symptoms.

Conclusions

The present study highlights the efficacy of the iFightDepression® online, self-management tool in the treatment of mild to moderately severe depressive symptoms in a six-week intervention period. The study empowers the need for 'blended therapy', the integration of web-based elements with face-to-face treatment.

Results suggest that multimodal treatment (conventional therapies along with guided, self-help programs and phone-based support) can enhance clinical outcomes, probably due to the synergistic effect of the different modalities. Future studies could helpfully clarify the mechanisms and active ingredients of interrelations among these modalities.

Properly trained phone support providers apparently enhance the effectiveness of online self-management tools, and the two modalities in combination may shorten the response time of concurrent, conventional treatment. Such an effect may one day offer a viable challenge to depression treatments with otherwise slow or limited response rates.

Another important aspect of this study has been the benefit derived from using an online, self-management program even during the coronavirus pandemic, where face-to-face contact with the healthcare providers is very limited. This study confirms that the IFD® tool together with additional phone support is an effective and still a resourceful way of enhancing the delivery of therapy for mild to moderately severe depression in routine primary or mental health care institutions. Easy access is guaranteed since patients can use it at home on their own devices with minimal personal contact with their mental health professionals. Integration of such telepsychiatric measures should significantly reduce the exacerbation of psychiatric problems over time and quite possibly forestall lethal outcomes such as suicide. Although the best improvement of depression symptoms was found among residents of an urban area, it would seem, that professionally supported, online self-help tools have the potential to improve the quality of health care, therefore the quality of life for all.

Acknowledgements

The authors acknowledge and are grateful for the tremendous help and suggestions of Dr András Vargha and Dr Szabolcs Takács in statistical analysis. Special thanks go out to all GP's and psychiatrists who spread the word and helped recruit patients.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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Note

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