

Research Article

Treatment of Primary Care Patients with Mild to Moderate Anxiety by Means of iCBT - Interplay Between Patient Satisfaction and Increased Quality of Life

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ABSTRACT

Introduction: Patients' access to cognitive behavioral therapy (CBT) is generally limited in primary care; the current situation requires simpler and more economical ways to access equivalent treatment. One such treatment alternative is internet-based CBT (iCBT). The study aimed to analyze the impact of iCBT on anxiety and quality of life in patients with mild to moderate anxiety. The secondary aims were to study patient satisfaction with the treatment program and the cost-effectiveness of the treatment compared to that of traditional CBT.

Materials and methods: The study had an interventional design with measurements 3 months and 9 months after the end of the treatment. A total of four instruments were employed. Two surveys, one targeted at patients and one targeted at therapists, were designed. Nonparametric tests and Spearman's correlations were used. Regression analysis was

performed to adjust for the probable impact of background variables. All tests were double sided, and the significance level was set at 0.05.

Results: A total of 48 patients participated in the intervention, of whom 35 (73%) completed the entire intervention. Thirty-two of the patients improved (78%; $p < 0.001$). Changes between baseline and after treatment occurred independent of age, sex, therapist and prior experience of similar treatment. Patient satisfaction with the treatment program and therapists was high (Median = 68.0; IQR = 59.5 - 74.5) and was positively correlated with patient quality of life ($p = 0.047$). The calculation of the cost of iCBT indicated an economic profit of SEK 8.040 per patient.

Keywords: Anxiety, iCBT, Primary care.

Introduction

Anxiety and depression are major growing challenges that involve human suffering worldwide [1]. Seventy percent of patients with anxiety and/or depression in Sweden access and receive treatment from primary care [2]. There is strong evidence that cognitive behavioral therapy (CBT) is an effective treatment alternative for anxiety disorders [3]. The national guidelines from the Swedish Board of Health and Welfare [4] state that CBT is a highly recommended treatment alternative for several anxiety-related diagnoses. Nevertheless, primary

care has limited conditions to offer psychological treatment to the extent needed. Patients' access to CBT is also generally limited in primary care, which depends on a number of factors, such as lack of licensed therapists with adequate education, cost and long waiting lists [5,6]. The current situation therefore requires simpler and less expensive ways for patients to access at least equivalent treatment. One such treatment alternative is internet-based CBT (iCBT). There is evidence that iCBT is a functional, effective treatment alternative for several anxiety and mood disorders [7-11]. A review paper of effectiveness studies focusing on guided iCBT for psychiatric and somatic

conditions found that the positive effects of iCBT in efficacy studies were replicable in clinical settings [12]. In most of the studies included in this review paper, however, treatment had been administered by clinics specialized in internet-based/computerized treatment. Furthermore, iCBT has been associated with a significant reduction in depressive and anxiety symptoms and high levels of patient satisfaction in clinical settings [13].

Several studies have shown similar treatment effects of therapist-supported iCBT and face-to-face CBT [14]. Therapist assistance is an important component in iCBT, and therapist behaviors have been described [15]. Over time, studies have been able to establish that iCBT is efficacious and acceptable, provides increased access to treatment, and is cost-effective for patients and society [7,12,13,15]. From a public health perspective, it is important that treatment efforts are made at an early stage to prevent more severe mental health problems and the need for psychiatric care at the specialist level. Early intervention and treatment should be initiated in the event of mild to moderate anxiety and be treated in primary health care. However, there are still a limited number of studies that examine the implementation and effect of iCBT for anxiety disorders in regular primary care centers (PCCs). There is a need for further research concerning issues such as (1) the replicability of treatment results attained in research centers and specialized units; (2) interest in and acceptability of iCBT in patient groups; and (3) the possible advantages, disadvantages and obstacles/problems perceived by patients and therapists. The present study thus aimed to analyze the impact of iCBT on a selective group of patients with mild to moderate anxiety. The secondary aims were to study whether beneficial side effects, such as a reduction in depression symptoms and increased patient satisfaction and quality of life with treatment, could be ascertained and whether the treatment was cost-effective compared to traditional CBT.

Material and methods

Study design

The study had an observational intervention design, with patients followed up at baseline and shortly (3 months) after the end of the treatment. Nine months after the end of the treatment, another follow-up measurement of the resulting changes over time was conducted.

PCCs and study participation

Primary healthcare constitutes the foundation of health and medical care for the population. The areas of responsibility of primary healthcare include medical treatment, health promotion and disease prevention as well as rehabilitation and care. All PCCs in the study area were invited to refer their patients to participate in the study. Participating PCCs were connected to a centralized primary care iCBT unit that was set up and operated. Two therapists with CBT training worked on the project to perform all required activities according to structured routines for recruitment, assessment and treatment. The PCCs remained responsible for the patients' treatment during the entire study

period. Table 1 presents descriptive information of patient recruitment and dropout.

Course of action

The study treatment was designed as an observational study based on a 3-month intervention. A total of 48 patients were enrolled between May 2016 and May 2017 at one PCC located in the southwestern region of Sweden. The profile of this PCC was identical to the average PCC profile at the province level. All patients were assessed by a psychologist/psychotherapist (therapist). The iCBT treatment was administered using a treatment program purchased for this purpose. The therapist actively followed the patient's progress, communicated with the patient every week via secure messaging in the treatment program and encouraged the patient to provide feedback about his or her experienced progress. When deemed necessary or upon the patient's request, telephone calls or extra office visits were added. The study protocol is described in the methods section.

Patients

Patients aged 19 years and older with symptoms of mild to moderate anxiety who attended the study PCCs were recruited through self-referral or GP referral. Patients were eligible for iCBT as a treatment option if they had not recently (last month) started or changed antidepressant medication, and eligible patients were asked about their willingness to participate in the study.

The patients were also required to be able to read and understand Swedish text, have some computer skills, have access to a computer/tablet/smartphone, have access to a working internet connection, be able to participate in the treatment without interruption for at least 2 hours a week, be motivated to change their situation and be willing to try internet-based treatment. Patients were assessed in two steps before they were included in the treatment. The initial screening was performed through a telephone interview with a therapist and was followed by a further diagnostic assessment at an in-office visit. The exclusion criteria were as follows: history of other mental illness or disease, addiction, pronounced suicidality or psychosis. The diagnostic process was conducted using structured assessment interviews and validated instruments.

Treatment process

Patients who met the inclusion criteria received a personal login from a therapist. The login allowed them to access a commercially available program in Swedish called *Angesthjalpen*®. The program is based on CBT techniques and includes components from acceptance and commitment therapy. The program consists of eight modules that the patients could access via the secure national platform Support and Treatment (Inera). The platform was nationally developed, and the national management of the service ensures its quality and safety. The therapists actively followed the patients' work and progress in

the program every week. Patients received support from the same therapist who had performed their initial assessment at the PCC. Patients and therapists could communicate via secure e-mail in the program or telephone when needed (although telephone contact was rarely requested). The treatment generally took 8-10 weeks. Patients were given access to new exercises each week and gradually worked through the 8 modules of text and films that constituted the treatment program. The therapist's task was to support and answer questions via text messaging in the treatment program or by phone. A follow-up visit was conducted after the end of treatment. Manuals for the therapists and other staff at the care center were developed by the research group. The goal was to employ an interactive design to demonstrate interactions between the therapist and patient, stakeholder analysis, risk analysis, the communication plan, and the evaluation plan. Finally, a routine/checklist for patient visits was developed to ensure that the inclusion and exclusion criteria were evaluated and that patients received adequate information about the treatment and its conditions.

Therapists

Two treatment therapists were involved in the study. These therapists were psychologists with training in CBT and previous experience in providing CBT treatment for anxiety disorders, but they had not previously worked with iCBT. The therapists were introduced to the aim, design and procedures of the project. Throughout the research period, the therapists were regularly supervised by a psychologist with experience in iCBT and the current treatment program.

The intervention processes

An equivalent study that examined iCBT treatment for anxiety disorder in primary care from three different but coherent perspectives (triangulation) could not be identified in previous studies. Therefore, power calculation was not possible at the initial stage when the effect size was unknown. The triangulation process involved the use of validated and established instruments, patients' own statements and reflections on the treatment program (patient satisfaction) and therapists' perspectives of the patients and the treatment process.

Instruments

The General Anxiety Disorder 7-item scale (GAD-7), Patient Health Questionnaire (PHQ-9), 12-item version of the WHO disability Assessment Schedule 2.0 (WHODAS 2.0) and Brunnsvikien Brief Quality of Life scale (BBQ) were completed at the start of treatment and the end of treatment. Two surveys, one targeted at patients and one at therapists, were designed by the research team. The surveys were completed individually by the patient and the main therapist after the termination of treatment.

GAD-7

The GAD-7 is a scale designed to diagnose generalized anxiety disorder. It has been shown to have good sensitivity and specificity as a screener for panic syndrome, social anxiety, and posttraumatic stress disorder [16]. It consists of 7 questions with

4 answer options per question: Not at all (0), Several days (1), More than half of the days (2), and Almost every day (4). The total score for the nine questions ranges from 0-21 points. Scores of 5, 10, and 15 are used as cut-off points for mild, moderate, and severe anxiety, respectively. The patients in this study had mild to moderate anxiety.

PHQ-9

The PHQ-9 is a self-administered version of the PRIME-MD. It is an internationally validated depression questionnaire (23). The instrument consists of 9 questions with 4 answer options per question: Not at all (0), Several days (1), More than half of the days (2), and Almost every day (4). The total score ranges from 0-27 points.

WHODAS 2.0

The WHODAS 2.0 aims to determine the degree of difficulty that a person experience in performing activities [17]. The simple score calculation, which was employed in the current study, involves summing all item scores; each item includes the following answer options: No difficulty (1), Mild difficulty (2), Moderate difficulty (3), Severe difficulty (4) and Extreme difficulty or cannot do (5) [17]. A simple sum score of the questions in each domain provides sufficient statistics to describe the degree of functional limitations.

BBQ

The BBQ is a validated self-rated scale of subjective quality of life. The first paper describing the development and psychometric validation of the BBQ (the original Swedish version) was published in the journal *Cognitive Behaviour Therapy* [18]. The BBQ total score is computed by summing the weighted satisfaction ratings, i.e., by multiplying the satisfaction and importance items for each life area and summing the six products for a total score (possible score range 0-96) [18].

Patient survey

The patient questions included questions on patients' increased understanding of problems, support from the therapist, and the therapist's availability, as well as the Working Alliance Inventory (WAI).

WAI

The 36-item WAI, based on Bordin's theory, was developed in 1989 to measure the strength of the therapeutic alliance [19]. Thereafter, a rationalization of the questionnaire was carried out, and a 12-item form of the WAI, i.e., the Working Alliance Inventory-Short Form Revised (WAI-SR), was developed [20]. Higher scores indicate a better therapeutic alliance. The questionnaire assesses the following aspects: the patient's satisfaction with treatment and experienced problems or difficulties during the treatment period.

Therapist survey

The staff survey consisted of questions about each patient and covered several themes, such as recruitment, previous

experience of CBT, sick leave, medication, amount of time spent with each patient, and perceived motivation for treatment. The survey also included suspected reasons for dropout if a patient had discontinued treatment early.

Statistical methods

The data were analyzed in the statistical program SPSS (SPSS, IBM). Descriptive statistics, such as the frequencies, means (SDs) and medians (IQRs), and proportions (%), were used to describe the background variables. A nonparametric Wilcoxon signed rank test was used to study the baseline data in relation to the data collected 3 months and 9 months after the treatment. When the current data had missing values, the values were excluded or replaced by the nearest median value and were compared with the current baseline data. The results were obtained through nonparametric tests and presented as boxplots. Bivariate nonlinear correlation, i.e., Spearman's correlation, was used to analyze the association between patient satisfaction and quality of life (BBQ score) in the study. Regression analyses were used to adjust for the probable impact of background variables. All tests were double sided, and the significance level was set at 0.05. Cronbach's alpha coefficient was used for reliability testing of the WAI (Cronbach's alpha = 0.93).

Ethical approval and consent to participate

All participants were invited to complete the questionnaires, were informed both verbally and in writing about the voluntary nature of participation and were guaranteed confidentiality. The study conformed to the principles outlined in the Declaration of Helsinki and was approved by The Regional Ethical Review Board in Lund, Sweden (2016/9).

Results

Background

A total of 48 patients participated in the intervention, of whom 35 (73%) completed the entire intervention. The mean age of those who completed the intervention was 39 years, and the mean age of those who started the treatment but did not complete it was 36. The majority of patients were women who had some kind of employment. Most were referred to psychological treatment by their GP or other experts in the field. The largest proportion of patients were not recruited from the waiting list (Table 1).

Anxiety reduction after the treatment (short term)

The treatment was completed by 35 patients. Thirty-two of them (78%) improved, while 2 patients showed unchanged levels of anxiety; the median GAD-7 score dropped from 11.5 at baseline to 5.0 after the completion of treatment (median = 5.0 even after adjustment for missing values). After the imputation of missing values, the results showed that 81% of patients had improved. The improvement was statistically significant regardless of the choice of method ($p < 0.001$) (Figure 1). Changes between baseline and after treatment occurred independent of age, sex, therapist and prior experience of similar treatment.

Associations among the instruments

In addition to a decrease in anxiety symptoms, a significant decrease in depressive symptoms (as measured by the PHQ-9) and improvement in patients' disability assessments (as measured by the WHODAS) were observed. Furthermore, patients reported a significantly increased quality of life (as measured by the BBQ). There was a positive association

Table 1: Descriptive statistics of patients' background variables and baseline information from the study instruments. The proportion, mean (SD) and median (IQR) are shown.

		PARTICIPANTS IN THE INTERVENTION (N=48)					
		Completed (n=35)			Discontinued (n=13)		
		Mean (SD)	Median (IQR)	%	Mean (SD)	Median (IQR)	%
Age		39 (15)			36 (11)		
Sex	Male			29			23
	Female			71			77
Employment	Employee			57			91
	Self-employed			6			0
	Job seeker			4			0
	Student			18			0
	Other			13			9
Patient referral	Referral by GP/Other professional			79			75
	Self-referral			21			25
Recruited from waiting list	Yes			17			50
	No			83			50
Previous psychotherapy treatment				74			75
Pretreatment:							
GAD			11 (9 – 14)			12 (6 – 19)	
PHQ-9			11 (7 – 14)			11 (7 – 16)	
WHODAS			25 (20 – 29)			24 (19 – 27)	
BBQ			45 (31 – 56)			42 (34 – 50)	
WAI			68 (60 – 75)			66 (59 – 67)	

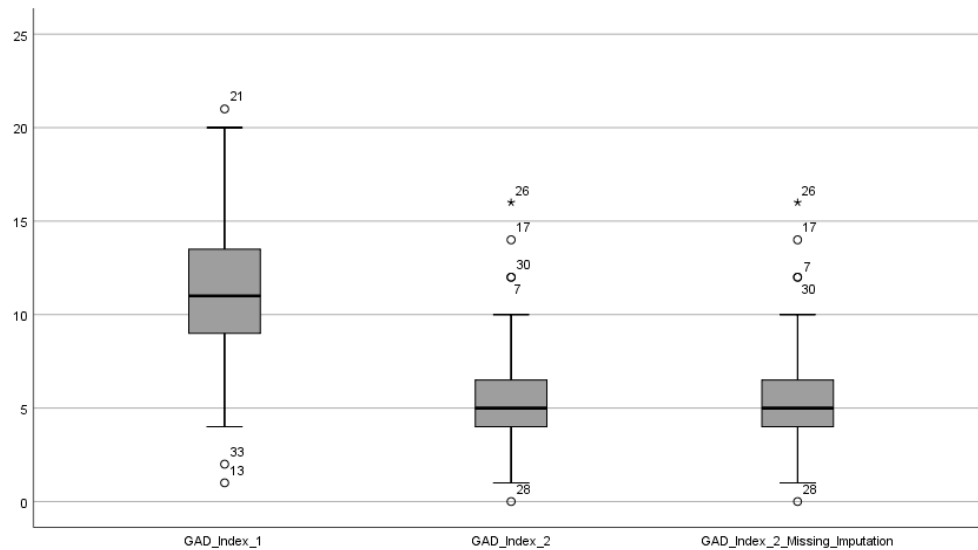


Figure 1: Mild to moderate anxiety among patients undergoing iCBT. The values correspond to baseline and after completion of treatment - both current values (GAD index 2) and adjusted values for missing values (GAD 2 Missing Imputation) ($p < 0.001$).

between improvement in the GAD-7 score and improvement in the PHQ-9 score ($r = 0.79$; $p < 0.001$) as well as between improvement in the GAD-7 score and improvement in the WHODAS score (0.61 ; $p < 0.001$) from baseline to the end of treatment. Furthermore, a statistically significant correlation was found between the PHQ-9 and WHODAS scores ($r = 0.65$; $p < 0.001$) on the one hand and between the PHQ-9 and BBQ scores on the other ($r = 0.50$; $p = 0.001$). Finally, there was a statistically significant association between the WHODAS and BBQ scores ($r = 0.38$; $p = 0.016$).

Triangulation in the treatment process

Patients' satisfaction with the treatment program as well as their appreciation of therapist competence were high (median = 68.0; IQR = 59.5 - 74.5). The WAI score was positively correlated with patients' self-reported quality of life as indicated by the BBQ score ($r = 0.35$; $p = 0.047$). Furthermore, a significant interaction was found between patients' perception of the program's impact on their understanding of their problems and their management of their problems. Patient problem management was significantly positively correlated with patient satisfaction ($r = 0.48$; $p = 0.005$).

Regarding the WAI results, the patients reported that the treatment covered relevant areas ($r = 0.62$; $p < 0.001$) and that they received the support they needed from the therapist ($r = 0.36$; $p = 0.037$). Furthermore, they perceived the therapist to be available when needed ($r = 0.36$; $p = 0.034$). The program contributed to patients' increased understanding of their problems and how to manage these problems. In turn, the therapists generally considered the patients to be motivated to engage in treatment ($r = 0.38$; $p = 0.026$) and indicated that the treatment had been of great benefit to the patients ($r = 0.52$; $p = 0.002$). In general, the patients reported that they would like to recommend the treatment to a friend (91%).

Health economic calculation (effectiveness of the intervention)

The intervention aimed to reduce mild to moderate anxiety and improve patients' quality of life. The intent was that this goal would be achieved under ordinary circumstances (effectiveness) and would be as cost-effective as possible compared to ordinary treatment. Based on Region Halland's database template, it was estimated that a psychological visit costs SEK 1200/h. This estimate formed the basis for the cost comparison between traditional psychological visits and treatment via the internet. The calculation of costs is shown in Table 2.

Long-term GAD

Follow up of patients' anxiety continued for a period of 9 months after the end of treatment. The good results of the intervention persisted for a total of 25 out of the 30 patients who had reduced their anxiety, but 4 patients had worse values, and one patient's values were unchanged (median = 5.0; IQR = 1.8 - 7.2). For the patients with continued good results, the improvement was statistically significant ($p < 0.001$).

Dropout analysis

Based on the therapist reports, a total of 13 patients discontinued treatment (27%). The possible causes were assessed through multiple-choice questions. The main causes of incomplete treatment were patients' life situations that prevented them from participating ($n=9$), lack of motivation ($n=8$), assessment of the inadequacy of the program ($n=6$), need for greater therapist contact ($n=5$), experience of sufficient improvement ($n=3$), technical problems ($n=1$), and other unspecified causes ($n=2$).

The motivation for treatment was similar across participants at baseline, but during treatment, those that reported decreased

Table 2: The calculation of iCBT costs compared to those of traditional CBT.

	COSTS of TREATMENTS	
	Face-to-face CBT	iCBT
Psychologist visit (1 h)	SEK 1 200	
Number of visits (10 times)	SEK 12 000	
Psychologist visit (1 h x 2 times*)		SEK 2 400
Psychologist contact (15 min/week) x 8 times		SEK 2 400
Treatment program		SEK 1 000
Total	SEK 12 000	SEK 5 800
	(EUR 1 085)	(EUR 525)

* initial and end calls

Note: However, the results of the study showed a time estimate for each patient of 200 minutes/patient: treatment ((Mean=177.1; SD 81.4) and telephone contact (Mean=24.5; SD=34.5). The result indicated an estimated cost of (200/60 minutes = 3.3) x SEK 1200 per hour = SEK 3.960 per patient. This gives an economic profit of (SEK 12.000 - SEK 3.960) = SEK 8.040 per patient.

motivation were more likely to drop out than those who did not report decreased motivation.

Discussion

Summary

The study aimed to analyze the probable impact of iCBT on a selected group of patients with mild to moderate anxiety after completion of treatment. The results showed clear improvement through a reduction in anxiety symptoms in patients. In addition, they also indicated a decrease in depressive symptoms and improvement in everyday functioning as well as self-rated health and quality of life. Furthermore, significant correlations were found between the therapist's positive interpretations of treatment progression and patient satisfaction with the treatment program and the therapist. Finally, a favorable cost estimation of iCBT treatment compared to face-to-face CBT was made.

General discussion

iCBT is a relatively new approach to providing care for mental health problems that requires repeated interventions to be able to consolidate its position in the field. Although stances on the use of iCBT as a treatment method vary [7-9], there are still factors that indicate that the advantages outweigh the disadvantages (ibid). In the current study, we demonstrated a clear reduction in anxiety shortly after the end of treatment as well as in the long term. The observed effect was not a pure effect because the study design lacked controls, but it was still on par with those of other studies in which equivalent conclusions were reached [10,11]. Another interesting finding is the covariation found between the reduction in anxiety symptoms as measured by the GAD-7 and the reduction in depressive symptoms as measured by the PHQ-9. This positive interaction likely contributed to a favorable synergy that promoted the patients' self-rated health status (WHODAS) during and after the treatment.

Another interesting finding is the favorable interplay between patient satisfaction with treatment and the therapeutic relationship (as measured by the WAI) and increased quality of

life (as measured by the BBQ). We were not able to find any other study on the treatment of mild to moderate anxiety with iCBT in primary care that reported a similar finding.

There is no accepted gold standard for therapist-assisted iCBTs. Hadjistavropoulos et al. used audit and feedback (A&F) as a quality improvement method, but they did not measure the relationship between the therapist's score and the patient's outcomes [21]. However, several meta-analyses observed alliance-outcome relationships in online interventions as in traditional face-to-face therapies [22], and the WAI has been used in many studies to measure the relationship between the patient and the supporting therapist [23,24]. In iCBT programs, the therapist should not therapize but rather only support the patient in self-activity. In our study, the results on the correlation between the WAI and BBQ scores indicated that positive interactions between the patient and therapist are connected to several favorable outcomes.

Based on single questions about patients' perceived quality of life, it can be concluded that therapists' perceptions aligned with patients' reported satisfaction with the program. A question regarding iCBT is whether therapists' more limited contact with patients can compare to the therapist-patient relationship in face-to-face treatment. However, research has shown that therapist-assisted iCBT applies some common therapist behaviors, such as empathy, common understanding and care for patients' suffering [25]. iCBT therapists can also provide complementary explanations of treatment content and exercises (ibid). Other factors that were found to contribute to patient satisfaction included the availability of the therapist when the patient needed support and patients' perception that the therapist understood their problems and how these should be handled. The therapist also perceived that the patients were motivated and expressed this, which in turn may have contributed to patients' satisfaction. The fact that patients expressed satisfaction with the treatment and wanted to recommend this treatment to friends with the same needs also suggested that the treatment had been effective.

Currently, there are strains on primary care, and when every third patient in the waiting room suffers from mental problems, most PCCs struggle to meet the need for treatment for mental health issues. To address this challenge, new and more effective ways of caring for these patients need to be developed. In meta-studies, it has been possible to determine the cost-effectiveness of iCBT in terms of the health economic benefits for patients and society, as iCBT requires less of a time commitment for the therapist, and thus, more patients can be cared for [7,26,27]. This finding was confirmed in our study, which provided an overview of the time allotted per patient and therapist. Many patients also appreciate meeting digitally with their therapist and avoiding travel time and travel costs, which also provides an environmental economic benefit.

To be able to receive high-quality iCBT treatment in primary care, it is important that the right patients, i.e., patients that are motivated and will complete their treatment, are offered the treatment for best results. Knowledge of patient characteristics

associated with increased dropout risk can provide an idea of which inclusion criteria should be set. A lack of motivation is an important factor related to nonparticipation and adherence to the treatment schedule [28].

However, there are also important factors that should be considered when these patients are offered iCBT. The patient-therapist alliance can be a crucial component. Duffy (2020) noted differences in the patient-therapist alliance between patients who completed and dropped out of treatment [29]. In the current study, we could not provide support for this finding, but we did find that a strong alliance seemed to be established, which other research has confirmed is crucial for good results [18].

Methodological discussion

Strengths and limitations

The study design consisted of a longitudinal treatment, which allowed each individual to be followed up over time and evaluated individually. The strength of the design was that the perception of the impact of treatment program on anxiety could be studied and measured from several perspectives (triangulation). These different aspects likely increased the confidence in the methodological approach of the study. Furthermore, the fact that patients had relatively mild to moderate anxiety problems and were treated within primary care was an additional strength, as this population has been investigated to a lesser extent. Another major strength indicated by the results was that the reduction in anxiety in the patient seemed to persist even in the long term. The limitations of the study included the lack of controls [27] and the limitations of the data, which probably reduced the strength of the assessment of the results. Another possible weakness was the choice of the WAI as an instrument [30], as we did not implement any validation analysis because the limited data could lead to skewed interpretations. However, an overall analysis of the internal consistency yielded a high alpha coefficient value, which can be interpreted as providing sufficient support for the choice of this instrument.

Future work

Implementation strategies are needed for the practical implementation of iCBT in primary care. For primary care to provide care for persons with mild to moderate anxiety in the future, different treatment alternatives are needed according to the target group in question. Furthermore, as much as possible, psychoeducative information about anxiety and other psychological problems, advice on beneficial coping strategies and less intensive versions of iCBT programs should be searchable on primary care websites. These sources could provide sufficient first treatment options for some patients, even though they do not involve contact with therapists. In case of warning signals of deteriorating mental health or the perceived need for additional support during treatment, access to a therapist can be provided automatically or requested. Another important consideration is the acute conditions associated with pandemics. In such circumstances, the need for mental health care is particularly important. Therefore, iCBT programs also

need to be developed to prevent more serious illnesses when specialist care is needed. Research on blended CBT, i.e., a mix of face-to-face sessions with internet-based material [24], has also indicated possibilities for more individualized treatment. Would it be possible to develop even better inclusion criteria in the future through the use of patient self-assessments? Perhaps blended CBT can be a treatment alternative for certain groups of patients who need more support from the therapist after a period of self-study. More research is needed on this topic.

Implications

In anticipation of a gold standard in iCBT, studies such as the current study are needed, both for hypothesis generation for future prospective studies and for implementing iCBT in primary care, with the aim of preventing severe anxiety and promoting public health.

Conclusion

The implementation of iCBT among primary care patients with mild to moderate anxiety resulted in significant patient improvement in both the short term and long term. The treatment contributed to reducing depression and to improving quality of life and achieved these outcomes for a much lower cost than face-to-face ICBT.

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Submission: 09 September 2020

Accepted: 17 September 2020