TAO-Related Improvement

Assisting Mental Health Therapy Using Online Tools

Summary

This white paper covers the need for effective internet-supported therapy and the key factors of online tools to assist therapists in affecting psychological improvement including: learning modules, daily client logs, and videoconferencing. With more and more psychologists and universities relying on telehealth every day, the demand for useful and effective web-based therapies is high.

Key findings:

More mental health improvement is seen when clients:

- complete more progress measures
- complete more sessions online
- complete more anxiety logs
- meet with their therapist using videoconferencing

Overall, clients who are more engaged with their online therapy tools show more improvement.

Introduction

Telemedicine, a method of healthcare using electronic communication, has become more widely adopted over the past 40 years. As part of this movement, psychologists may offer internet-supported therapy; either by giving the therapy entirely online or by pairing it with face-to-face, traditional therapy sessions.

Internet-supported therapy boasts several advantages to traditional therapy including cost benefits, increased client accountability, and ease of access for remote clients. These and other benefits allow the practitioner to help more clients with little extra work.

Is internet-supported therapy effective?

Internet-supported therapy has been shown to be *as effective* as in-person therapy for similar psychological problems (Barak et al, 2008, Osenbach et al, 2013). Notably, they have been found as effective in reducing symptoms and improving outcomes as traditional therapy.

What can my clients expect?

Internet-supported therapy comes in many forms; this may be fully online or alongside traditional therapy.

A few differences in websites have implications for client outcomes. For instance, sites with interactive elements were found to be more effective than purely informational sites (Barak et al, 2008). Websites that are open only to clients who have been screened and accepted by therapists also had higher effect sizes than sites open to anyone (Barak et al, 2008).

What TAO offers:

- **Educational Modules** that are designed to be informative and entertaining.

- **Interactive Elements** included in the modules for clients to immediately apply the knowledge to their lives.
- **Client Logs** which allow clients to report episodes of anxiety as they occur.
- **Videoconferencing** to meet with clients remotely.
- **BHM-20®** A quick (90 sec), comprehensive measure of global mental health, wellbeing, life functioning, and the symptoms that psychologists see most often.

Overview of Data

Data on therapists' and clients' use of the TAO website in the USA was collected from August 15th, 2016 – May 31st, 2017. This data includes 343 clients who all had begun treatment prior to March 31st, 2017 and who had completed the BHM-20® measure at least twice after August 2016.

Clients were assigned to at least one of four treatments: Anxiety, Behavioral Activation, Acceptance and Commitment Therapy, or Cognitive Behavioral Therapy. The Anxiety treatment was most popular with 215 clients completing at least one session of this treatment. Fifty-six clients in Behavioral Activation, 99 in Acceptance and Commitment Therapy, 28 in Cognitive Behavioral Therapy, and 4 in Adult Anxiety.

Progress Measure: BHM-20®

Celesthealth Behavioral Health Measure 20 is a 21-item measure of behavioral health. Each item is answered on a scale from 0-4 with 4 representing most healthy response. There are four major subscales including Global Mental Health, Well-Being, Life Functioning, and Symptoms. The Symptoms scale can then be broken down further into subscales for: anxiety, depression, alcohol and drug use, bipolar disorder, eating disorder, and suicide monitoring scale. Covering a broad number of the problems seen by therapists in a concise format, this measure was used to observe client outcomes.
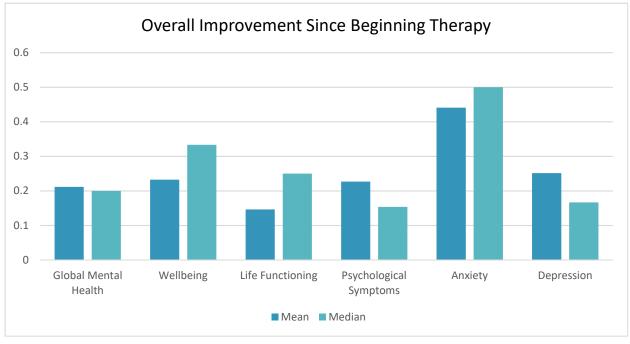

Figure 1. Improvement is defined as a change in scores from first to last completion of the BHM-20®.

TAO-Related Improvement

On average, clients reported mild distress on their first completion of the BHM-20®, indicating that they would benefit from therapy. Clients tended to improve most on the following six separate measures of improvement: Global Mental Health, Wellbeing, Life Functioning, Symptoms, Anxiety, and Depression. Therefore, these six measures will be most effective at demonstrating the benefit from various treatment tools.

Improvement was correlated with the number BHM-20® submissions, using Cohen's (1988) convention, at about moderate strength ($r \geq .30$). To a lesser extent, improvement was correlated with the number of days spent in treatment (from first to last BHM-20® submission).

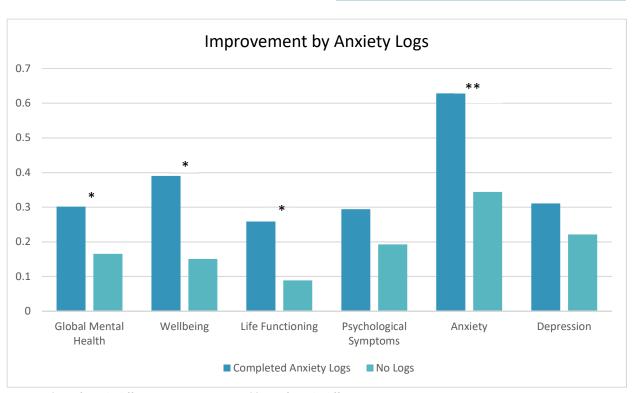| Table 1. BHM-20® correlations.		
	Number of BHM-20® Submitted	**Number of Days in Treatment**
Global Mental Health	**ρ = .27** **p < .001**	**ρ = .12** **p = .03**
Wellbeing	**ρ = .21** **p < .001**	ρ = .07 p = .17
Life Functioning	**ρ = .15** **p = .006**	ρ = .06 p = .27
Symptoms	**ρ = .29** **p < .001**	**ρ = .14** **p = .007**
Anxiety	**ρ = .31** **p < .001**	**ρ = .18** **p = .001**
Depression	**ρ = .26** **p < .001**	**ρ = .12** **p = .02**
n = 343	ρ, Spearman's rho for ranked data.	

Figure 2. *significantly different means at p ≤ .05, ** significantly different means at p ≤ .01

Sessions Completed

TAO Modules are split into several sessions of educational videos and interactive elements. On average, clients completed 13.92 sessions of their treatment(s).

Total number of sessions completed correlated with these same six subscales of the BHM-20® (see Table 2).

Bipolar change had a small correlation with number of sessions completed, $r = .15$, $p = .008$. The remaining four measures were not correlated with number of sessions completed.

Anxiety Logs

Of the 117 clients who used the Anxiety monitoring logs, clients would complete an average of 6.27 logs over the course of their treatment. These logs allow the client to report an episode of anxiety and apply the lessons they have had in previous modules. Clients who completed one or more Anxiety Logs showed more improvement in global mental health, wellbeing, life functioning, and anxiety than clients who did not complete any logs.

The more logs a client completed over the course of their treatment, the more improvement was seen in global mental health, wellbeing, and anxiety (see Table 2).

Videoconferencing

Therapists met with 220 separate clients using videoconferencing through TAO while 99 clients were in face-to-face therapy. Thirty-one clients were registered as self-help, although seven of them had between

Table 2. Correlations between number of activities completed and improvement.		
	Number of Sessions Completed	Number of Anxiety Logs Completed
Global Mental Health	$\rho = .31$	$\rho = .12$ $p = .03$
Wellbeing	$\rho = .29$	$\rho = .14$ $p = .009$
Life Functioning	$\rho = .22$	$\rho = .09$ $p = .08$
Symptoms	$\rho = .28$	$\rho = .10$ $p = .06$
Anxiety	$\rho = .28$	$\rho = .16$ $p = .003$
Depression	$\rho = .25$	$\rho = .08$ $p = .15$
n = 343	All rhos significant at $p < .001$.	Spearman's rho for ranked data.

2-12 meetings with their therapist via videoconferencing and were included in the videoconferencing group. Clients met with their therapists via videoconferencing an average of 4.75 times and spent an average of 21.49 minutes in the video counseling session. Data on face-to-face sessions was not collected.

There were some statistically significant differences between clients who used videoconferencing and those who did not. Upon further investigation, clients who met with their therapist using videoconferencing showed significantly more improvement in Global Mental Health, Life Functioning, Symptoms, Anxiety, and Depression than did their peers.
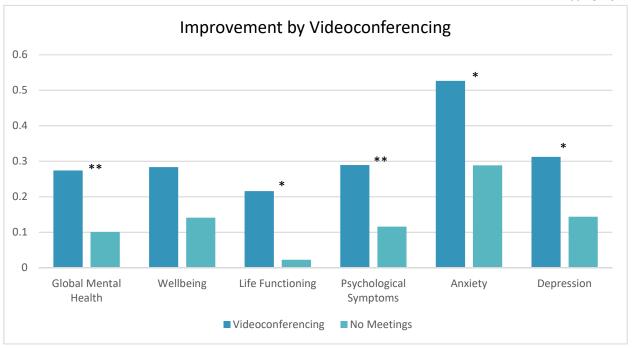
Improvement by Videoconferencing

*Figure 3. * significantly different means at p ≤ .05, ** significantly different means at p ≤ .01*

Conclusion

As with traditionally delivered therapy, client improvement depends on the client's willingness to effect change in their own lives. Clients who are more invested in making a change will likely be the ones who complete the most logs and the most module sessions.

This white paper has shown that when clients do use the online tools provided by their therapist, they make significant improvements in their mental health. Clients who complete more of the educational and interactive modules are improving their mental health. This is likely due to the information they are learning and able to immediately apply to their lives.

Clients who complete more of the anxiety monitoring logs are improving more than clients who do not use logs or do not use them regularly. This improvement is especially evident in their anxiety as

measured by the BHM-20®. Clients who use this tool more often are likely to see what triggers their anxiety, when their anxiety occurs or is the strongest, and the methods they use to cope with their anxiety which are more or less effective. Having logs available online at any time and in an easy-to-use format allows therapists to see clients' complete logs across time. Over time, and by discussing these ideas with their therapist, clients can use this information to create better coping mechanisms.

Finally, clients who meet with their therapist using videoconferencing show significantly more improvement compared to their peers. Data on face-to-face therapy sessions was not collected or reviewed for this white paper. There is no substitute for talk therapy and with videoconferencing, clients who would usually be unable or unwilling to go into a therapists' office,

have the option of talking with their therapist online.

While it has been shown that online therapy is as effective as in-person therapy, it is important to monitor the efficacy of any method of therapy. As online tools to assist therapy are developed and continue to advance, it will be imperative to continue to assess each component regarding its effectiveness in improving client outcomes.

Learn more about TAO Connect at: http://www.taoconnect.org/

References

Barak A., Hen, L., Boniel-Nissim, M. & Shapira, N. (2008). A comprehensive review and a meta-analysis of the effectiveness of internet-based psychotherapeutic interventions. *Journal of Technology in Human Services, 26,* 109-160. doi: 10.1080/15228830802094429

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Osenbach, J. E., O'Brien, K. M., Mishkind, M., & Smolenski, D. J. (2013). Synchronous telehealth technologies in psychotherapy for depression: A meta-analysis. *Depression and Anxiety, 0,* 1-10. DOI 10.1002/da.22165

Appendix

Correlation between sessions completed and other subscales.

	Alcohol and Drugs	Bipolar Disorder	Eating Disorder	Harm to Others	Suicide Risk
Total Sessions Completed	ρ = .03 *p* = .66	**ρ = .16** ***p* = .007**	ρ = .07 *p* = .20	ρ = .00 *p* = .20	ρ = -.04 *p* = .38

Correlation between logs completed and other subscales.

	Alcohol and Drugs	Bipolar Disorder	Eating Disorder	Harm to Others	Suicide Risk
Number of Logs Completed	ρ = -.12	ρ = .04	ρ = -.03	ρ = -.04	ρ = -.01

All *rho*s are non-significant.