Acceptability of positive technologies by patients with eating disorders: Results from a Randomized Control Trial

Ángel ENRIQUE^{a*}, Juana M. BRETÓN-LÓPEZ^{a,b}, Guadalupe MOLINARI^a, Soledad QUERO^{a,b} & Cristina BOTELLA^{a,b} ^aUniversitat Jaume I, Castellón, Spain ^bCIBER de Fisiopatología de la Obesidad y Nutrición (CIBEROBN), Madrid, Spain

Abstract. The present study is aimed to analyze acceptability ratings of positive technologies reported by patients with eating disorders. 54 patients were enrolled in a randomized control trial with two experimental conditions. In the intervention group (n=29), participants performed the best possible self exercise, through positive technologies, for one month. Likewise, participants in the control group (n=25) had to write about their daily activities also through technology. Acceptability levels were rated at the end of the one-month training. Results showed that participants of both conditions reported appropriate levels of satisfaction with the exercises and the technologies and they also perceived the exercises as useful. These results suggest that positive technologies can serve as a supporting tool delivering interventions aimed to improve positive emotions and well-being in clinical samples.

Keywords. Positive Technology, Best Possible Self, Eating Disorders, Well-being

1. Introduction

Eating disorders (EDs), are difficult conditions to be treated and patients often remain ill for many years [1]. In this sense, it has been suggested that interventions addressed to improve well-being in patients with such diagnoses can be useful as a way to buffer against the harmful effects caused by these conditions [2]. However, few studies have explored the efficacy of positive psychological interventions (PPIs) in ED samples. More specifically, given that these patients have difficulties imagining a better personal future, interventions aimed to promote optimistic thinking in this population can be of considerable benefit [2]. In this regard, one PPI that has been found useful at improving optimistic thinking is the best possible self (BPS) exercise [3].

Positive Technology (PT) has been defined as the scientific approach of technology for improving the quality of our personal experience as a way to enhance our well-being [4]. PT applications have shown appropriate levels of acceptability by users and they are effective in improving well-being and reducing depressive symptoms in general and clinical samples [4]. The present study aims to evaluate the acceptability levels of positive technologies rated by patients with eating disorders. These patients were part of

^{*} Corresponding Author: aenrique@uji.es

a randomized control trial that examined the efficacy of the BPS exercise for improving positive functioning measures (for a complete description see [5]).

2. Method

2.1. Participants

All the participants had a diagnosis of ED established by clinical psychologists. Mean age was 27 (SD = 8.6) and 96.3% of the sample were female. Regarding the level of education 55.6% of the sample had a university degree, 40.7% high school and 3.7% elementary school.

2.2. Positive Technology Applications

Book of Life. It seems like a personal diary composed of different chapters, each one addressed to write about significant life areas. Each chapter aims to promote specific strengths and all of them allow the user to include multimedia content such as images, music and videos, to complement the developed narrative.

TEO (Emotional-Online Therapy). It is a web-platform where a clinician can develop and organize therapeutic contents based on multimedia materials to be delivered to patients.

2.3. Procedure

54 participants were randomly allocated to: a) BPS condition (n=29) consisting on thinking and writing about a future in which all has gone in the best possible way; b) control condition (n=25) where participants were asked to report the activities, thoughts and feelings experienced at the past 24 hours. The experiment lasted for a period of one month. In the first session, participants completed the assigned exercise for 20 minutes. In the BPS condition, they performed the exercise through the Book of Life system, being able to add multimedia content to the essay. In the control condition, participants completed the task through a PowerPoint file. Finally, all the content developed by the patients of the BPS condition was uploaded to TEO and they were given a user name and password to practice the exercise at home. In the case of the control condition, participants were sent the PowerPoint file by email. Participants were encouraged to practice the exercise in home five minutes per day for one month. After that time, patients attended a final session where a credibility/expectancy questionnaire was administered to assess the experience of the patients with the technologies.

2.4. Measures

Credibility/ Expectancy Questionnaire [6]. This instrument was used to assess acceptability ratings with the technologies. Participants rated their degree of satisfaction and perceived utility on a 10-point Likert scale.

3. Results

Participants of both conditions reported adequate levels of satisfaction with the exercises (M= 6.70, SD = 2.54 for the BPS condition, M = 6.70, SD=1.72 for the DA condition) and they found them useful (M= 7.00, SD = 2.63 for the BPS condition, M = 6.70, SD=1.82 for the DA condition). Regarding the positive technologies used to perform the exercises, Figure 2 depicts the levels of satisfaction and usefulness for each one. Participants of the BPS condition reported to feel satisfied with both the technologies they used (Book of Life and TEO) and they found them useful. In the case of control condition, participants reported similar levels of satisfaction and usefulness with the PowerPoint file.

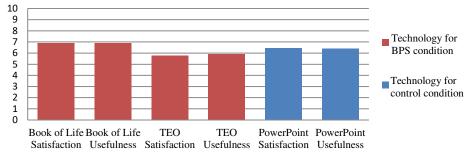


Figure 1. Acceptability levels for the different Positive Technologies reported by participants

4. Conclusions

The results regarding the satisfaction and usefulness levels of the exercises and the positive technologies indicate that participants felt satisfied and found them useful, which is in line with the results found in other studies with positive technologies [4]. The design of therapeutic procedures that are well rated by patients with ED is important in order to promote adherence to the treatment, given that conventional treatments of these conditions are often not aligned with patients' aims, resulting in high drop-out [7]. In addition, the Book of Life and TEO have shown to be flexible tools that can serve for the implementation of PPIs in clinical samples. Future studies could analyze the levels of acceptability and efficacy of other PPIs through these positive technologies and compare the results with a condition without technologies, in order to explore the specific contributions of these tools.

References

- A. M. Wood, S. & Joseph, The absence of positive psychological (eudemonic) well-being as a risk factor for depression: a ten year cohort study. *Journal of affective disorders* 122(3) (2010), 213-217.
- [2] H. Malson, B. Lin, S. Clarke, J. Treasure, G. Anderson, M. Kohn. Un/imaginable future selves: A discourse analysis of in-patients' talk about recovery from an «eating disorder». *European Eating Disorders Review* 19(1) (2011), 25-36.
- [3] J. M. Malouff, & N. S. Schutte. Can psychological interventions increase optimism? A meta-analysis. *The Journal of Positive Psychology* (2016), 1-11.

- [4] V. Guillén, C. Botella, M. R. & Baños. Psicología clínica positiva y tecnologías positivas. Papeles del Psicólogo (2017), 19-25.
- [5] A. Enrique, J. Bretón-López, G. Molinari, P. Roca, & C. Botella Efficacy of a positive psychological
- [6] T. D. Borkovec, & S. D. Nau, Credibility of analogue therapy rationales. *Journal of Behavior Therapy and Experimental Psychiatry* 3(4) (1972), 257-260.
- [7] S. Wonderlich, J. E. Mitchell, R. D. Crosby, T. C. Myers, K. Kadlec K. LaHaise,, ... & M. Jorgensen. Minimizing and treating chronicity in the eating disorders: a clinical overview. International Journal of Eating Disorders 45(4) (2012), 467-475.