

ORIGINAL ARTICLE

# Benefits of well-being therapy in out-patients with anxiety disorders and in a non-clinical population

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## Abstract

**BACKGROUND:** Well-being therapy (WBT) is a short-term and structured psychotherapeutic strategy, based on an educational cognitive-behavioral model. It is aimed to maximize well-being and quality of life.

**AIM:** To assess changes in levels of psychological distress, quality of life and well-being in patients with anxiety disorders and healthy volunteers treated with WBT.

**METHODS:** Cohort study following up patients with anxiety disorders and healthy volunteers until six months after the end of WBT treatment. Patients with anxiety disorders were allocated to WBT based on clinical indication and healthy volunteers recruited through study advertisement. Study outcomes were assessed using validated and widely used measures.

**RESULTS:** Eight patients and 40 healthy volunteers received WBT. After the end of treatment patients showed an improvement in both anxiety and general psychological symptoms as well as in well-being perception. Healthy volunteers had reduced sub-clinical anxiety levels and overall psychological symptoms, as well as increased psychological and physical health perception after the end of treatment. In both groups improvement was sustained six months after the end of treatment.

**CONCLUSIONS:** WBT may represent an useful adjunct to standard treatment of patients with anxiety disorders for tackling residual symptoms. In non-clinical population, WBT may maximize well-being and reduce vulnerability to mental disorders. Further larger and controlled experimental studies are warranted.

## INTRODUCTION

Historically mental health research and practice have focused on psychological deficits. "Health" has been identified as "absence of illness" rather than "presence of well-being" (Ryff & Singer 1996; Priebe *et al.* 2014).

However, recovery from a mental disorder may not only be helped by an amelioration of symptoms, but

also from interventions focused on positive aspects of human experience and on increasing patients' self-efficacy (Parloff *et al.* 1954; Ryff & Singer 1996; Fava *et al.* 2001). Absence of well-being could create a condition of vulnerability to stressful events and potential future adversities (Ryff & Singer 1996; Fava & Tomba 2009).

This has a relevance for people with anxiety disorders. Remitted patients with anxiety disorder show significant lower levels of psychological well-being than healthy controls (Fava *et al.* 2001). Moreover, in patients with mood and anxiety disorder who positively respond to treatment, often residual symptoms such as anhedonia and functioning impairment can be found and may predispose to relapse (Fava *et al.* 2007).

Promotion of psychological well-being may be also important in non-clinical populations for the prevention of mental illness and to favor personal growth and development (Ryff & Singer 1996; Seligman & Csikszentmihalyi 2000; Caffo *et al.* 2008).

A specific psychotherapeutic approach to maximize psychological wellbeing and quality of life, the *Well-Being Therapy* (WBT), was developed. WBT is a short-term and structured psychotherapeutic strategy, it is problem-oriented and based on an educational cognitive-behavioral model (Fava 1999). The WBT was designed to improve the six dimensions of psychological well-being as conceptualized by Ryff and Singer (1996): a) environmental mastery; b) positive growth; c) purpose in life; d) autonomy; e) self-acceptance; f) positive relations with others (Fava & Tomba 2009).

This study tested WBT on a group of patients with anxiety disorders and on a non-clinical population of healthy controls over 18 years of age. Effects of WBT on anxiety symptoms, overall psychological symptoms, self-reported physical and psychological health and psychological well-being were compared.

## METHODS

### Participants

Patients in treatment at the CBT clinic center of Naples for anxiety disorders, diagnosed according to DSM-IV criteria (APA 2000) were recruited in this study. Patients had been diagnosed with Generalized Anxiety Disorder, Panic Disorders and Phobias. Patients had already been treated with pharmacological therapy and cognitive-behavioral therapy and were referred to WBT therapy based on clinical indication.

Healthy volunteers who did not have a diagnosis of mental disorders according to DSM-IV were recruited advertising the study in the local university. They received explanation on the study and provided informed consent to participation in WBT groups and in the research. Healthy volunteers were then divided in two groups: a) Group A: immediately receiving WBT; b) Group B: on a waiting list during Group A treatment and receiving WBT once Group A sessions were completed.

### Intervention

WBT includes eight weekly sessions. The duration of each session is 50-60 minutes. WBT involves: a) self-observation using a structured diary; b) the interaction between group participants; c) the interaction between

participants and therapist and d) homework in order to check the learning and implementation of what was discussed during the session.

Hand-outs are provided to participants to maximize understanding and memorization of the content of the sessions.

The structure of the intervention is as follows:

### *Initial sessions (1 and 2):*

Patient are instructed to identify and write in a daily diary episodes of well-being of any duration, along with the situational contexts in which such well-being has been experienced, rating the emotional intensity according to a score ranging from 0 to 100; 0 indicates a minimum well-being perception and 100 a maximum well-being perception.

### *Intermediate sessions (3 to 5)*

In the subsequent sessions, the patient is encouraged to identify negative thoughts, the beliefs and expectations that lead to a premature interruption of well-being perception. Such thoughts and beliefs are challenged by the therapist, asking the patient for evidence for and against their beliefs or listing all the possible solutions to the expressed problem.

### *Final sessions (6-8)*

Patients are assessed according to the six well-being domains proposed by Ryff (Ryff 1989; Ryff & Singer 1996), focusing in particular on those that appear more impaired. Therapists assign and encourage enjoyable activities to increase well-being perceptions (Fava *et al.* 1998).

### Procedures and measures

All study participants received a detailed explanation on the study protocol and on the characteristics of the experimental treatment (WBT) before being asked to provide informed consent to participate in the study.

Enrolled participants were administered psychometric instruments to assess:

a) anxiety symptoms; b) quality of life; c) overall symptom level; d) psychological well-being. Assessment time points for patient group and Group A of healthy volunteers were: a) baseline: before initiating the WBT treatment; b) end of treatment: after having received 8 sessions of WBT; c) six month follow up.

Group B of healthy volunteers was assessed at baseline the same time as the two other groups, and then at the beginning of treatment (once the other two groups had completed their sessions) and at the end of treatment.

The following psychometric instruments were used:

1. *Hamilton Anxiety Scale* (HAS) (Hamilton 1959): HAS was developed to assess anxiety symptoms, with an emphasis on patient subjective perception rather

**Tab. 1.** Well Being Therapy outcome measures in the patient group (n=8) at baseline, end of treatment and six months follow up

| Scales   | Baseline       | End of treatment | Six months follow up | P value <sup>5</sup> |
|--|----------------|------------------|----------------------|----------------------|
| HAS <sup>1</sup>                               | 35.75 ±7.89    | 16.50 ±7.27      | 20.25± 10.5          | p<0.0001*            |
| Q-LES-Q <sup>2</sup><br>General activities     | 47.88 ±15.90   | 51.13 ±17.08     | 51.3± 16.8           | p=0.2285             |
| SF-36 <sup>3</sup><br>Physical health          | 61.656 ±25.641 | 61.156 ±17.675   | 60± 15.5             | p=0.2687             |
| SF-36 <sup>3</sup><br>Psychological health     | 46.437 ±21.995 | 48.343 ±28.292   | 57±11                | p=0.0994             |
| SCL-90-R <sup>4</sup><br>Global Severity Index | 158.63 ±74.17  | 106.00 ±62.57    | 97±72                | p=0.0021*            |
| PWB <sup>5</sup>                               | 271.00 ±43.39  | 315.63 ±20.25    | 315± 16.44           | p=0.0130*            |

<sup>1</sup>Hamilton Anxiety Scale

<sup>2</sup>Quality of Life Enjoyment and Satisfaction Questionnaire

<sup>3</sup>Health Survey Short Form

<sup>4</sup>Symptom CheckList 90 - Revised

<sup>5</sup>Psychological Well-Being scale

<sup>6</sup>p-values of the t-tests for paired samples comparing six month follow up scores and baseline scores

than on objective features. Time period assessed is the week preceding the interview for subjective items and the interview for behavioral items. Overall, the HAS consists of 14 items. Factorial analysis has identified two subscales: a) Somatic anxiety (item 7,8,9,10,11,12,13); b) Psychological anxiety (items 1,2,3,4,5,6, 14). Each item is rated on a five-point scale ("absent", "mild", "moderate", "severe", "very severe")

2. *Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q)* (Endicott et al. 1993): Q-LES-Q is a self-rated scale of the pleasure in and satisfaction with different life domains. It includes 58 item exploring five areas, i.e. physical health (13 items), subjective feelings (14 items), leisure activities (6 items), social relationships (11 items) and general activities (14 items). Two items are separately rated and explore satisfaction with treatment (if any treatment is received) and "general satisfaction". Each item is rated on a five-point scale and higher scores reflect higher satisfaction or pleasure.

3. *Symptom CheckList -90- Revised (SCL-90-R)* (Hardt et al. 2000): SCL-90 is a self-rated instrument for psychological symptoms. It includes 90 items which explore the nine domains encompassing the majority of symptoms experienced by patients with common mental disorders, i.e. somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, and a category of "additional items" which helps clinicians assess other aspect of the clients symptoms (e.g. item 19, "poor appetite"). Time period assessed is the week before the interview. Each item is rated on a scale from 0 to 4. SCL-90 assessment yields three indexes: a) - GSI - *General Symptomatic Index*, i.e. the overall score divided by the number of rated items; b) - PST - *Positive Symptom Total*, i.e. the number of items rated from 1 to 4; c) - PSDI - *Positive Symptom Distress Index*, i.e. the overall score dived by PST.

4. *Health Survey Short Form (SF-36)* (Apolone & Mosconi 1998): SF-36 explores self-reported psychological and physical health. It includes 36 items that are divided in eight sub-scales (vitality, physical functioning, bodily pain, general health perceptions, physical role functioning, emotional role functioning, social role functioning, mental health).

5. *Psychological Well-Being Scale (PWB)* (Ruini et al. 2003): PWB consists of 84 items divided in six subscales (self-acceptance, positive interpersonal relationships, autonomy, environmental mastery, personal growth and purpose in life). Interviewees rate their agreement with reported statements on a six-point Likert scale from 1=completely disagree to 6=completely agree).

#### Statistical analysis

Descriptive statistics for socio-demographic and clinical characteristics of participants variable have been calculated. Differences in outcome measures at baseline and end of treatment as well as at baseline and six months follow up have been test using t-test for paired samples. Minimum level of statistical significance was set at p=.05.

## RESULTS

#### Sample characteristics

Participants with anxiety disorders were 8. They were all women, with an age range from 28 to 46 years (mean age 33.75). Among them, 12.5% had achieved a primary school degree, 50% a secondary school degree and 37,5% a university degree; 25% were students, 37,5% were unemployed and 37.5% were employed.

Healthy volunteers were 40, 57.5% were female; volunteers had a mean age of 24.2 years, 40% were student, 52.5% were employed, 7.5% were unemployed; 2.5% had a primary school degree, 60% a secondary

school degree and 37.5 a university degree. The two healthy volunteer groups (one with 23 and one with 17 participants) were matched for these socio-demographic characteristics.

Effects of WBT in the patient group

End of treatment vs. baseline

HAS score (anxiety of life) dropped from 35.7 (Standard Deviation, SD=7.9) to 16.5 (SD=7.3),  $p<.001$ . Q-LES-Q score (quality of life) remained stable, varying from 47.9 (SD=15.9) to 51.1 (SD=17.1),  $p=.36$ . Global severity index of the SCL-90 showed a reduction in general symptoms from 158.6 (SD=74.2) to 106.0 (SD=62.6),  $p<.01$ . Self-reported psychological and physical health did not significantly change. Physical health score was 61.2 (SD=25.6) at baseline and 61.2 (SD=17.7) at end of treatment,  $p=.096$ . Psychological health score was 46.4 (SD=21.9) at baseline and 48.3 (SD=28.3) at end of treatment,  $p=.57$ .

Psychological well-being perception showed a significant increase. PWB score was 271.0 (SD=43.4) at baseline and 325.6 (SD=20.3) at end of treatment,  $p<.05$ .

Six months follow up vs. baseline

In the six months follow up, benefits of the WBT on anxiety symptoms, overall symptom levels and well-being perception were maintained compared to baseline. Table 1 reports the scores of the scales at baseline, end of treatment and at the six months follow up and the significance level of the t-test for paired samples comparing six-month follow up scores and baseline scores.

Effects of the WBT in the healthy volunteer's group

In the healthy volunteers group an improvement of anxiety levels, psychological and physical health

perception, overall and psychological symptoms were observed after the end of treatment. The Group B of volunteers, which started the treatment later, did not evidence any improvement before the treatment started but showed significant improvement in the outcomes considered after receiving the WBT sessions.

The benefits achieved after end of treatment in the Group A were maintained in the six months follow up.

Outcomes of WBT treatment in the two healthy volunteers group are reported in Table 2.

Comparing improvements in the outcomes considered in the patient group and in the healthy volunteer group, we observe that patients have achieved more significant benefits in: a) anxiety levels (34% vs. 8% reduction); b) overall symptoms (11% vs.1.3% reduction); c) well-being perception (11% vs. 6%)

A different trend is observed for self-reported physical and psychological health measured with the SF-36. Psychological health is increased by 6.8% in healthy volunteers and by 2% in patients. Physical health is increased by 4.4% in the healthy volunteer groups whilst no increase is observed in the patient group.

A comparison of outcome measures scores between patient group and healthy volunteer groups (the latter are merged) is presented in Table 3.

**DISCUSSION**

Main findings

The addition of WBT to standard pharmacological and psychological (CBT) therapy of patients with anxiety disorder has helped to achieve substantial clinical gains regarding reduction of anxiety levels, general clinical symptoms and well-being perception.

In the group of healthy volunteers an improvement of sub-clinical anxiety levels and overall psychological

**Tab. 2.** Well Being Therapy outcome measures in the healthy volunteer groups (n=23 ad n=17) at baseline, end of treatment and six months follow up

| Scales                                      | Group A (n=23) Mean (SD) Baseline | Group A (n=23) Mean (SD) End of treatment | Group A (n=23) Mean (SD) Six Months | Group B (n=17) Mean (SD) Baseline | Group B (n=17) Mean (SD) Before treatment | Group B (n=17) Mean (SD) End of treatment |
|---|-----------------------------------|---|-------------------------------------|-----------------------------------|---|---|
| HAS <sup>1</sup>                            | 8.94 ±4.5                         | 5.3 ±2.9                                  | 6.44 ±3.27                          | 11.82 ±7.85                       | 10.88 ±6.12                               | 6.11 ±4.47                                |
| SF-36 <sup>2</sup> Physical Health          | 88.46 ±5.7                        | 91.23 ±3.56                               | 85.68 ±6.42                         | 81.10 ±9.70                       | 81.09 ±9.62                               | 87.61 ±4.35                               |
| SF-36 <sup>2</sup> Psychological Health     | 76.42 ±12.8                       | 79.75 ±9.3                                | 71.94 ±13.07                        | 66.28 ±18.22                      | 66.36 ±18.03                              | 77.83 ±16.02                              |
| SCL-90-R <sup>3</sup> Global Severity Index | 35.69 ±5.5                        | 30.47 ±4.33                               | 30.22 ±4.28                         | 61 ±39                            | 60 ±35                                    | 53.38 ±12.76                              |
| PWB <sup>4</sup>                            | 367.73 ±11                        | 389.63 ±12.48                             | 409 ±7.2                            | 369 ±9.3                          | 373.5 ±8.10                               | 411 ±7.2                                  |

<sup>1</sup> Hamilton Anxiety Scale

<sup>2</sup> Health Survey Short Form

<sup>3</sup> Symptom CheckList 90 - Revised

<sup>4</sup> Psychological Well-Being scale

**Tab. 3.** Pre-treatment and post-treatment outcome measures in patient and healthy volunteer group<sup>1</sup>

| Scales   | Patient group (N=8) Mean (SD) Pre-treatment | Patient group (N=8) Mean (SD) Post-treatment | Healthy volunteer group (N=40) Mean (SD) Pre-treatment | Healthy volunteer group (N=40) Mean (SD) Post-treatment |
|--|---|--|--|---|
| HAS <sup>2</sup>                               | 35.75± 7.37                                 | 16.5± 6.80                                   | 10.16± 4.21  | 5.6± 2.52   |
| SF-36 <sup>3</sup><br>Physical Health          | 61.68± 32.58                                | 61.15± 29.29                                 | 85.33± 5.25  | 89.69± 2.75   |
| SF-36 <sup>3</sup><br>Psychological Health     | 46.43± 28.32                                | 48.34± 30.79                                 | 72.11± 10.6  | 78.93± 8.64   |
| SCL-90-R <sup>4</sup><br>Global Severity Index | 158.625± 69.38                              | 106± 58.53                                   | 46.44± 16.8  | 40.2± 5.9   |
| PWB <sup>5</sup>                               | 271± 40.58                                  | 316± 18.94                                   | 368.27± 7.44   | 398.71± 7.7   |

<sup>1</sup> Group A and Group B of healthy volunteers were merged

<sup>2</sup> Hamilton Anxiety Scale

<sup>3</sup> Health Survey Short Form

<sup>4</sup> Symptom CheckList 90 - Revised

<sup>5</sup> Psychological Well-Being scale

symptoms, as well as psychological and physical health perception, were observed after the end of treatment. In both groups benefits of WBT were maintained six months after the end of treatment.

Strength and limitations

This study provided independent confirmation to the positive effects of WBT in management of psychological distress and maximization of well-being both in clinical and non-clinical populations.

A number of limitations must be acknowledged: a) low sample size; b) only one site included; c) heterogeneous socio-demographic characteristics in the treated groups.

Comparison with the previous literature

The positive effect of WBT on residual anxiety symptoms after standard treatment is in line with previous studies. WBT was found to be more effective than CBT in increasing well-being perception in patients with affective disorders (Fava et al. 2007). In patients with generalized anxiety disorder (Fava et al. 2011) a combination between CBT and WBT was more effective than CBT alone in determining sustained improvement of anxiety symptoms and clinical remission after the end of treatment (Fava et al. 2001).

The WBT can increase wellbeing perception of patients, which may not only facilitate clinical improvement but also represent a protective factor from relapse (Fava & Ruini 2003; Ruini & Fava 2012). Moreover, people with anxiety disorders experience much poorer quality of life than healthy controls (Olatunji et al. 2007). WBT may induce more positive attitudes towards one's own life, which could explain the improvement in quality of life observed in our study.

The positive impact of WBT on well-being and psychological distress in non-clinical populations may point towards a possible role in reducing vulnerability

to mental disorders in target populations or in primary mental health disorders prevention.

Implications and conclusions

WBT may represent an useful therapeutic intervention to tackle residual symptoms in patients with anxiety disorders in clinical population as well as to maximized well-being and reduce vulnerability to mental disorders in general population.

Its ease of administration and acceptability could favor a wide implementation in both clinical and non-clinical settings, such as school and work environments.

Further and larger clinical studies are warranted to confirm benefits of WBT and to compare them with those of other interventions, both in clinical and non-clinical populations.

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