



ELSEVIER

Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres

Changes in physical activity, physical fitness, self-perception and quality of life following a 6-month physical activity counseling and cognitive behavioral therapy program in outpatients with binge eating disorder

Davy Vancampfort^{a,b,*}, Michel Probst^{a,b}, An Adriaens^a, Guido Pieters^a, Marc De Hert^a, Brendon Stubbs^c, Andy Soundy^d, Johan Vanderlinden^a

^aUPC KU Leuven, Campus Kortenberg, KU Leuven Department of Neurosciences, Leuvensesteenweg 517, B-3070 Kortenberg, Belgium

^bKU Leuven Department of Rehabilitation Sciences, KU Leuven, Tervuursevest 101, 3001 Leuven, Belgium

^cSchool of Health and Social Care, University of Greenwich, Eltham, London SE9 2UG, UK

^dDepartment of Physiotherapy, University of Birmingham, 52 Pritchatts Road, Birmingham B15 2TT, UK

ARTICLE INFO

Article history:

Received 30 January 2014

Received in revised form

2 May 2014

Accepted 12 May 2014

Keywords:

Binge eating
Physical activity
Exercise
Physical fitness
Quality of life
Self-perception

ABSTRACT

The aim of the current study was to explore the associations between changes in the number of binges, physical activity participation, physical fitness, physical self-perception and quality of life following a 6-month physical activity counseling and cognitive behavioral program in patients with binge eating disorder (BED). In total 34 (31 women) outpatients with BED (38.5 ± 10.7 years) completed a 6-month 1-day per week group-based program. Participants completed the 36-item Short Form Health Survey, the Baecke Physical Activity questionnaire, the Physical Self Perception Profile and performed a 6-min walk test (6MWT) at baseline, after 3 and 6 months. Except for physical activity at work, physical strength and self-worth perception, all parameters significantly improved after 6 months. The effect sizes ranged from -0.33 for the number of binges to 1.67 for participation in sports activities. Significant increases in leisure time physical activity were associated with significant improvements in physical health related quality of life, perceived sports competence and physical fitness and in perceived body attractiveness. The significant reduction in the number of binges was associated with significant improvements in physical health related quality of life. Future research should focus on detailing which techniques can stimulate physical activity participation in patients with BED.

© 2014 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

Binge eating disorder (BED) is characterized by frequent and persistent episodes of binge eating accompanied by feelings of loss of control and marked distress in the absence of regular compensatory behaviors (American Psychiatric Association, 2013). It is associated with specific psychiatric co-morbidity and significant medical and psychosocial impairments (Javaras et al., 2008). Although obesity is not a criterion for BED, there is a strong positive association between weight and BED symptoms and more than 65% of the BED patients are obese (Hudson et al., 2007). Obese binge eaters often show more severe obesity, greater psychopathology, more weight and shape concerns and body dissatisfaction, more negative self-evaluations,

lower self-esteem and an impaired health related quality of life compared with obese non-binge eaters (Javaras et al., 2008; Vancampfort et al., 2014). For example, almost 70% of BED patients have at least one additional lifetime psychiatric disorder (Javaras et al., 2008; Grilo et al., 2013). The most common disorders include mood disorder, anxiety disorders, and substance-abuse.

Physical health problems of BED are largely, however not solely (Hudson et al., 2010), due to comorbid obesity and to physical inactivity (Sherwood et al., 1999; Hrabosky et al., 2007; Vancampfort et al., 2014). The level of physical activity reported by obese individuals who binge is approximately half of that of an age and weight matched community sample (Levine et al., 1996). Because of the severe co-morbid psychiatric and physical conditions, BED has been characterized as one of the most difficult psychiatric conditions to treat (Yager, 2008).

Often the treatment for individuals with BED is focused on improving key parameters such as weight and shape concerns,

* Corresponding author at: UPC KU Leuven, Campus Kortenberg, Leuvensesteenweg 517, B-3070 Kortenberg, Belgium. Tel.: +32 2 758 05 11; fax: +32 2 759 9879.
E-mail address: Davy.Vancampfort@uc-kortenberg.be (D. Vancampfort).

body dissatisfaction, health related quality of life, obesity and physical inactivity (Vanderlinden et al., 2007). Specialized psychotherapies, in particular cognitive behavioral therapy (CBT) and interpersonal therapy, are effective for reducing binge eating, but not all BED patients respond adequately (Vocks et al., 2010). Grilo et al. (2011) previously found that a 24-week CBT program (16 × 60-min group sessions) is superior for producing reductions in binge eating through 12-month follow-up compared with a 24-week (16 × 60-min group sessions) behavioral weight loss (BWL) program focusing on making gradual lifestyle changes with goals of moderate caloric restriction and increased physical activity. In contrast, the BWL program produced statistically greater, albeit modest, weight losses during treatment compared with CBT (Grilo et al. 2011). Grilo et al. (2011) did not find support for the utility of a sequential approach in which CBT is delivered first followed by BWL.

Regarding pharmacotherapy in the treatment of BED, Reas and Grilo (2014) recently reported in their review that the evidence base regarding the efficacy of medications for BED still is in its early stages and remains limited. However, topiramate was identified as one medication that may demonstrate some promise in reducing binge eating episodes and enhancing weight loss (Reas and Grilo, 2014). Reas and Grilo (2014) furthermore indicated that combining pharmacotherapy (e.g., fluoxetine) with psychological interventions does not significantly enhance binge eating outcomes, although the addition of certain medications (e.g., desipramine) may enhance the modest weight loss achieved with CBT and BWL.

A particular intervention that may prove useful as an adjunct to the treatment of BED, and which has not been investigated before, is physical activity counseling. There are several reasons for the potential added value. For instance, a recent review on physical activity interventions in persons with BED (Vancampfort et al., 2013) demonstrated that aerobic and yoga exercises might reduce the number of binges and the body mass index (BMI) of BED patients. Furthermore, aerobic exercise reduces depressive symptoms but combining aerobic exercise with CBT is more effective in reducing depressive symptoms than CBT alone (Vancampfort et al., 2013).

To date, no author has investigated whether combining physical activity counseling and CBT has beneficial effects on participation in physical activity participation, physical fitness, physical self-perception, binge eating and health related quality of life of patients with BED. Further to this, research is needed to consider whether any changes in the number of binges, physical activity participation, physical fitness, physical self-perception and health related quality of life following such an intervention are related. Since lifestyle programs designed with a sound theoretical basis tend to have a greater impact on levels of physical activity participation (Kahn et al., 2002), we applied the principles of the self-determination theory (Deci and Ryan 1985, 2000), behavior change techniques (Abraham and Michie, 2008) and motivational interviewing techniques (Miller and Rollnick, 2002) in this study.

The aim of the current study with a one-group repeated-measures design was to explore any associations between changes in physical activity participation, physical fitness, physical self-perception and health related quality of life following a 6-month physical activity counseling and CBT program in outpatients with BED.

2. Material and methods

2.1. Participants

Before start of the study all local general practitioners, psychiatrists, psychologists, clinical hospitals and patients' groups were informed about the 6-month 1-day per week physical activity and CBT program by flyers. All were informed that outpatients meeting the DSM-IV criteria for BED (American Psychiatric Association, 1994) could participate in the study. Diagnosis for those who were willing to participate was made at intake by a psychiatrist using the Structured Clinical

Interview for DSM-IV Disorders (SCID) (First et al., 1996). We excluded BED patients with any current psychiatric condition that required psychiatric hospitalization in addition to the weekly multidisciplinary BED program. Also patients who started with a new co-intervention (e.g. pharmacotherapy) for psychiatric reasons during the intervention phase were excluded. We also excluded people with cardiovascular, neuromuscular and endocrine disorders which according to the American Thoracic Society (2002) and the American College of Sports Medicine (2006) might prevent safe participation in physical activity interventions. Data were collected between January 2006 and January 2013. All outcome measures were collected at baseline, at week 12 (3 months) and at week 24 (6 months). The study procedure was approved by the Scientific and Ethical Committees of the UPC KU Leuven, campus Kortenberg, Belgium. All participants gave their written informed consent prior to start of the study. A total of 47 persons seeking treatment for BED were initially recruited but eight of these subsequently met one or more of the exclusion criteria (two were diagnosed with bulimia nervosa and did not meet DSM-IV criteria for BED, one had locomotor difficulties and one a cardiovascular disorder precluding safe participation in the physical activity counseling program, and four were diagnosed with co-occurring mental illness needing psychiatric hospitalization). Of the 39 included patients with BED (38.5 ± 10.7 years), of which 32 were women, nobody declined to participate. Between baseline and month 3, one patient dropped out for motivational reasons. Between months 3 and 6 two more patients dropped out for motivational reasons and one patient dropped out due to a locomotor disorder, while also one patient started with antipsychotic medication during the intervention and was excluded this way. In total 34 (31 women) patients with BED with a mean age of 38.5 ± 10.7 years completed the entire 6-month program. Except for a significant lower BMI (36.3 ± 1.75 versus 39.8 ± 8.3 , $p=0.0355$) in those who dropped out, there were no significant differences in baseline characteristics between completers ($n=34$) and drop-outs ($n=5$).

2.2. Intervention

All participants followed a group-based 6-month 1-day per week program. The program consisted of weekly structured group CBT sessions with a maximum of nine participants.

2.2.1. The physical activity counseling program

The physical activity counseling sessions took place from 9 a.m. to 10 a.m. and were executed by a specialist mental health physical therapist. Patients were encouraged to monitor their daily physical activity behavior using a pedometer (Yamax Digiwalker SW-200) and/or a diary. Both were made available throughout the 24 weeks. Individual physical activity goals were set up in collaboration with the patients according to their preferences and abilities. The goals were specified by physical activity type, location, time frame, possible barriers and solutions, and patients were encouraged to write them down in a personal weekly schedule. During the weekly 60 min group sessions, the physical therapist explicitly fostered the psychological needs postulated by the self-determination theory (Deci and Ryan 1985, 2000), i.e. autonomy (e.g., by providing options in type, location, time frame, lifestyle physical activity at work, during transportation, at leisure time or sports), competence (e.g., by providing positive and constructive feedback) and relatedness (e.g., by expressing empathy, facilitating support from the group, and focusing on the importance of involving family, friends or relatives). Moreover, physical activity goals were evaluated and modified if necessary with the patient, barriers were identified and participants were stimulated to persist in physical activity by using behavior change techniques (Abraham and Michie, 2008) and applying motivational interviewing techniques (Miller and Rollnick, 2002).

2.2.2. The CBT program

The protocol of the CBT program has been described in detail elsewhere (Vanderlinden, 2008; Vanderlinden et al., 2012). In summary, the CBT morning program (10.15–12 a.m.) was executed by a mental health nurse, two psychologists (one was also a dietician), and a psychiatrist. The sessions focused on (1) psycho-education about the risks of obesity and binge eating, (2) increasing motivation to change eating behaviors, (3) learning healthy eating behaviors (including self-monitoring of eating behavior, record keeping, stop dieting if applicable), and (4) increasing awareness of the different triggers to binge. The afternoon program (1.15–4 p.m.), facilitated by the same team, focused in particular on factors eliciting and maintaining the binges. Cognitive restructuring techniques in which patients learned to identify and challenge maladaptive cognitions regarding eating and weigh/shape thoughts were implemented (Vanderlinden, 2008). In addition, the afternoon CBT program focused on (1) improving self-esteem and assertiveness, (2) identifying, tolerating and expressing emotions, and on (3) preventing relapse, e.g. experimenting with coping strategies in high-risk situations.

2.3. Number of binges

The frequency of binges was assessed using the Eating Disorder Examination Interview (EDE; Fairburn and Cooper, 1993), a semi-structured interview. The EDE defines binges as eating unusually large quantities of food with a subjective sense

Download English Version:

<https://daneshyari.com/en/article/10304260>

Download Persian Version:

<https://daneshyari.com/article/10304260>

[Daneshyari.com](https://daneshyari.com)