Research report

Bibliotherapy and food cravings control

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A B S T R A C T

The use of self-help manuals or bibliotherapy could be an effective resource to treat obesity, but their effects on the elaborative processes of food cravings remain unclear. The present study examined whether bibliotherapy can effectively reduce food cravings in an overweight and obese adult population. 80 participants were randomly allocated either to the Self-help Manual group or the Intention-control group. They had to apply each resource over a period of 3 months whenever they felt a craving arise. During the baseline period most of the participants reported grazing as the main cause of their weight gain. Compared to baseline, the results of the third month of the follow-up revealed that intentions had paradoxical effects on food thought suppression, preoccupation with food, negative affect and guilty feelings; but the Self-help Manual promoted positive changes on the food cravings trait and its dimensions, food thoughts suppression, emotional and behavioural reactions to intrusions and BMI. These findings suggest that the Self-help Manual could be useful in reducing food cravings.

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Introduction

Food cravings refer to an intense desire to eat specific foods, which is different from physiological hunger (Kemps & Tiggemann, 2010). Food cravings could be an ordinary experience in everyday life and substantially contribute to predict diet failure (Meule, Westenhöfer, & Kübler, 2011). This could be related with dimensions of the food cravings trait, as lack of control over eating and intentions as well as plans to consume the desired food (Meule, Lutzl, Vögele, & Kübler, 2012).

According to the Elaborated Intrusion Theory of Desire (EI-theory), elaboration of unwanted intrusive thoughts about a desired target is a gateway which leads to cravings (Kavanagh, Andrade, & May, 2005). In EI-theory an intrusive thought is the beginning of an elaborative episode for the individual. An intrusive thought could emerge from an associative process linked with: physiological deficit, negative affect, external cues, other cognitive activity and anticipatory responses to the target; but their progressive elaboration is the key process for the cravings’ maintenance. Elaborative and associative processes feed among themselves when the target elicits powerful affective reactions or a keen sense of deficit.

Food-related thoughts may play an important role in the maintenance of unhealthy eating behaviours (May, Andrade, Batey, Berry, & Kavanagh, 2010) and the suppression of these thoughts could provoke increases in the consumption of the desired food (Adriaanse, van Oosten, de Wit, & Evers, 2011; Erskine, 2008; Erskine & Georgiou, 2010).

The Cuban population prefers sweet and fatty foods over fruits and vegetables (Porrat-Maury, 2009). Recent data shows that the population’s obesity rates increased throughout the last decade (Jiménez-Acosta, Díaz-Sánchez, García-Roche, Bonet-Orgea, & Wong-Ordóñez, 2012). The National Institute of Food Hygiene has developed an integral plan in the prevention and control of overweight and obesity (INHA, 2007). However, this plan does not provide the answer to a frequently asked question: “How do I control my cravings to eat...?” Common parlance would usually suggest to these individuals to exert their willpower; fight temptations; overcome their desires; control their impulses and so on (Hepler, Albarracin, McCulloch, & Noguchi, 2012).

Although the predictive value of intention is inversely proportional to time (Ajzen, 2011), it can explain 21% of the variance on diet behaviour, 24% on physical activity (McEachan, Conner, Taylor, & Lawton, 2011), 33% on breakfast consumption (Kothe, Mullan, & Amarasingha, 2011), 39% on snacking behaviour (Collins & Mullan, 2011), 55% on vegetable and fruit consumption (Kothe, Mullan, & Butow, 2012) and 62–65% on the purchase of fresh and organic food (Dean, Raats, & Shepherd, 2012). In addition, a multinational study has shown that the intention can explain 14% of the variance on the maintenance of dietary outcomes after 6 months of follow-up (McConnon et al., 2012).

To achieve self-control on food cravings, individuals must not eat, that is, must perform an inaction intention (Hepler et al., 2012). However, inaction goals could be difficult to achieve for many people, e.g. those with high traits of impulsivity (Albarracin,
Intention may not be enough to control food cravings, since unsuccessful restrained eaters have a tendency to inhibit their goals in tempting situations (Papies, Strobeke, & Aarts, 2008).

Many studies have been performed in an attempt to understand mental images and thoughts that lead to food cravings (Hommer et al., in press; Kemps & Tiggemann, 2010; Meule, Skirde, Freund, Vögele, & Kübler, 2012; Nasser et al., 2011; Nederkoorn & Jansen, 2002; Siep et al., 2012; Tiggemann & Kemps, 2005; Tiggemann, Kemps, & Parnell, 2010) and another significant number of experiments have been designed to control them (Alberts, Mulkens, Smeets, & Thewissen, 2010; Alberts, Thewissen, & Raes, 2012; Andrade, Pears, May, & Kavanagh, 2012; Brunner & Siegrist, 2012; Hooper, Sandoz, Ashton, Clarke, & McHugh, 2012; Kemps & Tiggemann, 2010, 2012; Kemps, Tiggemann, & Bettany, 2012; Knäuper, Pillay, Lacaillé, McCollam, & Kelso, 2011; May et al., 2010; Meule, Freund, Skirde, Vögele, & Kübler, 2012; Morewedge, Huh, & Vogserau, 2010; Stapleton, Sheldon, Porter, & Whitty, 2011; van Kleef, Shimizu, & Wansink, 2013). There is an ample amount of evidence to inform people about the main characteristics of food cravings and to give them different alternatives to achieve their control.

Self-help manuals or bibliotherapy could be an effective resource in the treatment of obesity (Latner, 2001) or other eating disorders (Wilson & Zandberg, 2012). They also promote the consumption of fruits and vegetables (Steenhuis et al., 2004), but their effects on elaborative processes of food cravings remain unclear. Bibliotherapy for weight loss is currently spreading inside Internet-based interventions (Arem & Irwin, 2011). Although they offer some advantage, e.g. recruiting a significant number of men (Lubans, Morgan, Collins, Warren, & Callister, 2009; Morgan, Warren, Lubans, Collins, & Callister, 2011; Morgan et al., 2010), we have adopted a predominantly self-help model (Newman, Szkodny, Llera, & Przeworski, 2011).

Recently, the effectiveness of a Self-help Manual on general unwanted intrusive thoughts in a non-clinical sample was evaluated (Rodríguez-Martín, Moritz, Molerio-Pérez, & Gil-Pérez, 2012). Inside this sample some individuals reported food-related thoughts and experienced a reduction in their frequency, but intervention did not target the elaborative processes that underlie the food cravings.

The aim of this study is to evaluate the effectiveness of a Self-help Manual for reducing: (a) food cravings trait; (b) the emotional and behavioural impact of food-related thoughts and (c) the use of food thoughts suppression in a sample of overweight and obese individuals. Interventions are not designed to target BMI, but we assess their collateral effect.

Following the EI-theory (Kavanagh et al., 2005) with the application of competing imagery or other tasks which bring about a high working memory load, we could predict that an elaborative response to the initial intrusion will be prevented. If intention to control is attempted through thought suppression, we could also predict increases in food cravings or thoughts suppression.

### Methods

#### Participants

The participants were 80 individuals who responded to our recruiting advertisements and fulfilled the inclusion criteria. The advertisements sought “overweight or obese people (without diagnosed psychiatric disorders), who are experiencing strong cravings for foods in their everyday life and would like to reduce these cravings”. We specifically recruited overweight and obese (Type I) individuals, with problems controlling their food cravings. For the individuals to be selected, they had to report strong food cravings frequently (more than once per day). Advertisements were transmitted by the local media (Radio and TV) emphasising the fact that the intervention was not a diet.

Participants were aged between 19 and 72 years old (Mean = 39.34, SD = 13.61), with 72.5% being females. Regarding marital status, most of the participants 52.5% were married while 41.3% were single. Half of the participants had obtained secondary education, and 31% had finished higher education. None of the participants reported being diagnosed with psychiatric disorders and, 70% of them were classified as “healthy”. The rest were divided as follows: five with asthma; three with diabetes; thirteen with high blood pressure and three with other chronic conditions.

#### Self Help Manual

The aim of the Self-Help Manual was to control the intrusive thoughts and cravings related to food (Gomez-Quintana, Gil-Pérez, Rodríguez-Martín, Nieves-Achón, & Fernández-Castillo, 2011). A pilot study showed its effectiveness in controlling food cravings in overweight individuals (Gómez-Quintana, 2012).

The manual’s design was theoretically based on the EI-theory (Kavanagh et al., 2005) using imagery and non-imagery tasks that selectively target the components of cravings in working memory, to prevent an elaborative response to the initial target-related intrusion.

Suggestions for the control of intrusions and cravings were compiled from successful experimental results: visual and olfactory interference (Kemps & Tiggemann, 2010); use of replacements under critical cues (Adriaanse, van Oosten, et al., 2011); self-visualisation of eating the craved food 33 times (Morewedge et al., 2010) or performing a pleasant activity (Knäuper et al., 2011), among other imagery diversion tasks (May et al., 2010); writing about relevant values (Logel & Cohen, 2012) and keeping alert while the food is being prepared (Quinn, Pescoe, Wood, & Neal, 2010).

#### Experimental design

A 3 × 2 mixed factorial design was used. The within-subject factor was “Time”, referring to the mean of dependent variables throughout the baseline (BL) to the follow-up (from the first month to the third month). The between-subject factor was “Group”, referred to as experimental condition self help manual (SH) and control condition intention to control food cravings (Intention). Forty participants were randomly allocated inside each group.

#### Measures

**Demographic characteristics:** Participants were asked to provide demographic information: age; gender; height; education; marital status; diagnosis of chronic or psychiatric conditions and current weight.

**Weight history:** Participants were asked four questions. Do you often restrain your feedings to reduce or maintain your weight? Do you often do physical exercises? (Yes/No) How many hours, on average per day, do you spend watching TV? What is the main cause of your weight gain? (open format). The answers to this question were grouped into three categories: (1) overeating on regular meals; (2) grazing; (3) emotional cues that trigger food cravings.

**Weight Cycling Questionnaire:** This is a brief assessment of individuals’ tendency to experience weight fluctuations (Peterson, 2008). Participants respond to questions such as, “How often do you lose and regain weight?” on a 5-point Likert scale ranging from 1 (never) to 5 (always). This questionnaire was translated for
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