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Randomised controlled trials of psychological & pharmacological treatments for body dysmorphic disorder: A systematic review

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ABSTRACT

Treatment for body dysmorphic disorder (BDD) often involves a combination of psychological and pharmacological interventions. However, only a small number of randomised controlled trials (RCTs) have been undertaken examining the efficacy of different therapeutic interventions. The aim of this study was to systematically review the RCTs involving psychological and pharmacological interventions for the treatment of BDD. The literature was searched to June 2015, and studies were included if they were written in English, empirical research papers published in peer-review journals, specifically assessed BDD patients, and involved a RCT assessing BDD symptoms pre- and post-intervention. Nine studies were identified: six involving psychological and three involving pharmacological interventions. Cognitive behaviour therapy, metacognitive therapy and selective serotonin reuptake inhibitors were identified as treatments with potential benefit. The small number of RCTs and the heterogeneity of findings emphasises the need for more high quality RCTs assessing both psychological and pharmacological interventions for BDD.

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1. Introduction

Body dysmorphic disorder (BDD) is a psychiatric condition characterised by a preoccupation with a perceived deficit or flaw

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in one's appearance, and repetitive behaviours related to this perceived imperfection (American Psychiatric Association, 2013). Treatment for BDD often involves a combination of psychological and pharmacological interventions, typically cognitive behaviour therapy (CBT) and selective serotonin reuptake inhibitors (SSRIs), respectively (Castle et al., 2006). Although these are the recommended treatments for BDD (National Collaborating Centre for Mental Health, 2006), the number of randomised controlled trials (RCTs) assessing their efficacy is relatively sparse. A systematic review of the literature undertaken by Ipser et al. (2009) identified three psychological and two pharmacological RCTs in BDD, and concluded that both types of therapies may be beneficial in the treatment of BDD. However, as identified by the authors, the small number of RCTs and conservative sample sizes used in these studies limits this conclusion. Since the review by Ipser et al. (2009) was undertaken, a number of further RCTs in BDD have been published. The aim of this paper was to provide an updated systematic review of the published data related to RCTs of psychological and pharmacological treatments of BDD. Specifically, we aimed to summarise the outcome of BDD symptoms (using three prominent measures in the field, as defined in our methods section) pre-and post-intervention. A secondary aim was to briefly comment on the outcome of secondary symptoms.

2. Methods

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement for reporting systematic reviews was followed.

Studies were identified by searching databases to June 2015 and scanning relevant reference lists. Results were limited to English language. Search strategies were developed by one of the authors (H.W.) for Medline (EBSCOhost) and adapted for PsycINFO (EBSCOhost), CINAHL (EBSCOhost), EMBASE (Embase.com), Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effect, Cochrane Central Register of Controlled Trials, Cochrane Methodology Register, Health Technology Assessment Database, NHS Economic Evaluation Database, Informit Health Collection and Humanities & Social Sciences Collection, ClinicalTrials.gov, and NIH RePORTER.

The Medline (EBSCOhost) search strategy was {(MH "Body Dysmorphic Disorders") OR body dysmorph* OR dysmorphophobia* OR body image disturbance* OR body image dysfunction* OR body image disorder* OR muscle dysmorph* OR dysmorphic disorder* OR imagined ugliness} AND {(PT "Randomized Controlled Trial") OR (PT "Controlled Clinical Trial") OR (PT "Clinical Trial") OR (PT "Comparative Study") OR (PT "Evaluation Studies") OR (MH "Randomized Controlled Trials as Topic+") OR (MH "Clinical Trials as Topic+") OR (MH "Evaluation Studies as Topic+") OR (MH "Follow-Up Studies") OR (MH "Prospective Studies") OR (MH "Cross-Over Studies") OR (MH "Random Allocation") OR (MH "Single-Blind Method") OR (MH "Double-Blind Method") OR (MH "Placebos") OR (MH "Research Design") OR clinical trial* OR latin square OR placebo* OR random* OR control* OR prospectiv* OR volunteer* OR [(singl* OR doubl* OR trebl* OR tripl*) AND (mask* OR blind*)]}. This strategy was adapted for the other databases, taking into account search syntax and subject headings particular to each database (see Appendix A for details). The Medline search strategy for RCT's was created with reference to Ipser et al. (2009), Robinson and Dickersin (2002), and McKibbon et al. (2009).

Studies were screened independently based on titles and abstracts by two of the authors (S.R. and A.P.), with discrepancies resolved by a third author (D.C.). Studies were included if they met the following criteria: written in English, empirical research paper published in a peer-review journal, specifically assessed BDD patients (meeting DSM-III or DSM-IV criteria) and reporting a RCT assessing BDD symptoms pre- and post-intervention. The following information was extracted from the included studies: participant characteristics (age and gender), intervention (type, dose, duration and frequency) and outcome. Three authors were contacted (McKay et al., 1997; Hollander et al., 1999; Phillips, 2005b) for further information. Phillips (2005b) responded, but did not have the resources to provide the missing numerical data. The two remaining authors could not be reached. A brief summary of the study characteristics is provided in Tables 1 and 2. The missing data related to age and gender distributions (Phillips, 2005b) and BDD symptom scores (Hollander et al., 1999; McKay et al., 1997). BDD symptom scores were available for intervention and control groups in the study by Hollander et al. (1999) at the study endpoint, but this data was not provided for each group separately at baseline, thus not allowing a baseline effect size to be calculated.

2.1. Measures

The primary outcome measures were the Yale-Brown Obsessive Compulsive Scale modified for Body Dysmorphic Disorder (BDD-YBOCS) (Phillips et al., 1997), the Body Dysmorphic Disorder Examination (BDDE) (Rosen and Reiter, 1996) and a modification of the National Institute of Mental Health Global Obsessive-Compulsive Scale for BDD (BDD-NIMH). The BDD-YBOCS is a 12-item semi-structured clinician-rated measure of BDD severity during the past week, and is the most widely used research measure of BDD severity. The BDD-YBOCS assesses BDD-related repetitive behaviours, appearance defects, insight and avoidance. Each item is rated on a Likert scale from 0 to 4. Total scores range from 0 to 48, with higher scores indicating greater severity of BDD symptoms.

The BDDE is a 34-item semi-structured interview of BDD symptoms over a one month period. Twenty-eight of these items are used to calculate symptom scores, with items rated on a 0–6 Likert scale. Scores can range from 0 to 168, with higher scores representing increased BDD symptom severity. BDD-NIMH is a 15-item scale (scores from 0 to 15) providing a global rating of BDD severity.

Means and standard deviations were extracted from manuscripts for pre- and post-intervention scores for both intervention and control groups. Effect sizes (g) and confidence intervals (CIs) were calculated within and between groups for pre- and post-intervention scores. g was used over Cohen's d in the current study as it provides better estimates when small sample sizes are involved. Effect sizes could not be calculated from two studies due to limited reporting of statistics (Hollander et al., 1999; McKay et al., 1997). Given the heterogeneity of the data, with each study using different methods of treatment (e.g. medication type, dosage, treatment duration, method of therapy), it was not deemed appropriate to complete a meta-analysis.

Risk of bias, or 'study quality' was assessed by examining a number of variables including the level of blinding, random sequence generation and drop-out rate (Table 3).

3. Results

Nine articles were deemed eligible for the review: six psychological and three pharmacological. Flowchart 1 describes the records identified through the search, and the number of included and excluded studies. Table 1 presents an overview of the study characteristics and a summary of BDD symptom scores at baseline and primary end-point. Effect sizes ranged from medium-large for psychological interventions, and small-medium for pharmacological therapies. Table 2 presents a summary of the number of