The validity of the transdiagnostic cognitive behavioural model of eating disorders in predicting dietary restraint

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ABSTRACT

The study examined the validity of the transdiagnostic cognitive behavioural theory of eating disorders. The aim was to determine if the maintaining mechanisms of clinical perfectionism, core low self esteem, mood intolerance and interpersonal difficulties have a direct impact on dietary restraint or an indirect impact via eating, shape and weight concerns. The model was tested in a community sample of 224 females recruited via the internet. The structural equation model provided a good fit for the data. The relationship between maintaining mechanisms and dietary restraint was due to maintaining mechanisms impacting indirectly on dietary restraint via eating disorder psychopathology. The results lend support for the validity of the transdiagnostic model of eating disorders as the maintaining mechanisms lead to restraint via the core psychopathology of eating concerns, weight concerns and shape concerns. The findings suggest the four maintaining mechanisms alone are not enough to lead to dietary restraint, the core psychopathology of eating disorders needs to be present, which supports the predictions of the theory. These results help establish the validity of the transdiagnostic cognitive behavioural theory of eating disorders.

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1. Introduction

Fairburn, Cooper, and Shafran (2003) proposed a transdiagnostic cognitive behavioural theory where the core psychopathology is overvaluation of eating, weight, shape and their control. Fairburn et al. stated in some patients, one or more additional maintaining factors may be present that will maintain the disorder; clinical perfectionism, core low self esteem, mood intolerance and interpersonal difficulties.

1.1. Clinical perfectionism

Perfectionism is a risk factor for Anorexia Nervosa (AN), Bulimia Nervosa (BN) and Eating Disorders Not Otherwise Specified (EDNOS) (Bardone-Cone et al., 2007). Individuals with AN and BN have higher perfectionism than controls (Egan, Wade, & Shafran, 2011). Steele and Wade (2008) found treatment of clinical perfectionism resulted in reduction in perfectionism and bulimic symptoms equivalent to standard Cognitive Behaviour Therapy for BN.

1.2. Core low self esteem

Core low self esteem impacts on the effectiveness of a treatment outcome (Fairburn, 2008). Griffiths and McCabe (2000) found lower self esteem in adolescent females was a significant predictor of dietary restraint and bulimic symptoms.

1.3. Mood intolerance

Mood intolerance is difficulty in coping with mood states (Fairburn et al., 2003) and can include self-harm or substance abuse. Claes, Vandereycken, and Vertommen (2001) found self injury behaviour was reported in 34% of AN and 44% of BN cases. Holderness, Brooks-Gunn and Warren (1994) reviewed 51 studies that have demonstrated associations between substance use and eating disorders.

1.4. Interpersonal difficulties

Interpersonal difficulties maintain eating disorders (Fairburn, 2008). Schmidt, Tiller, Blanchard, Andrews, and Treasure (1997) reported that 76% of individuals with AN and BN had experienced at least one interpersonal difficulty before the onset of their eating disorder.

1.5. Efficacy of CBT-E

Fairburn et al. (2009) evaluated Enhanced Cognitive Behavioural Treatment (CBT-E) in 149 patients (38% BN, 62% EDNOS) who had a

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Table 1

Correlations, means and standard deviations for EDE-Q, TOMS, CPQ, SAS and RSES.

Measure	M	SD	1	2	3	4	5	6	7	8	9
1.R	1.65	1.9	–								
2.EC	.96	1.4	0.55	–							
3.SC	2.66	1.5	0.62	0.74	–						
4.WC	2.05	1.7	0.61	0.79	0.92	–					
5.EDQ	1.83	1.1	0.79	0.86	0.94	0.95	–				
6.CPQ	24.98	4.7	0.42	0.46	0.47	0.51	0.53	–			
7.RSES	29.29	4.0	0.26	0.48	0.52	0.52	0.50	0.51	–		
8.TOM	2.67	.57	0.32	0.54	0.47	0.51	0.51	0.50	0.55	–	
9. SAS	1.85	.38	0.24	0.44	0.43	0.43	0.43	0.37	0.61	0.50	–

Note: R = Restraint subscale, EC = Eating concerns subscale, SC = Shape concerns subscale, WC = Weight Concerns subscale, EDQ = Eating Disorder Examination Questionnaire, CPQ = Clinical Perfectionism Questionnaire, RSES = Rosenberg Self Esteem Scale, TOMS = The Tolerance of Mood States - general subscale and SAS = Social Adjustment Scale. All measures were significantly correlated at a $p < .001$ level.

BMI above 17.5. On intent to treat data 51.3% of patients had good outcome, maintained at 60 week follow up. Comparison of focused (CBT-Ef) with broad (CBT-Eb) treatment that addresses the four maintaining mechanisms, found that CBT-Eb was more effective for individuals that had maintaining factors. However, for those without, CBT-Ef was more effective. CBT-E also has success where BMI is below 17.5 as Byrne, Fursland, Allen, and Watson (2011) found in a sample of 125 patients (27% AN, 32% BN, 41% EDNOS) that on intent to treat data 41% had good outcome.

1.6. Rationale and aims

Despite data indicating efficacy of CBT-E no research has examined the validity of the transdiagnostic model, and treatment efficacy is not a direct test of validity of the model. The aim was to examine the validity of the model by examining the role of overvaluation of eating, weight shape and their control and the maintaining mechanisms in predicting dietary restraint in a community sample. We were interested in dietary restraint as it is a risk factor for the onset of BN (e.g., Stice, Davis, Miller, & Marti, 2008) so can help to determine the utility of the model in predicting risk for eating disorders.

2. Method

2.1. Participants

There were 224 females aged 18 to 71 ($M = 31.27$, $SD = 12.47$). The majority were working (80%) and 49% reported living a partner. Participants predominately lived in Australia (92%) with the remainder in other countries (8%). Self-reported weight and height were used to calculate BMI ($M = 24.71$, $SD = 5.64$, range = 16.2–59.5) (kg/m^2).

2.2. Measures

2.2.1. Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994)

The four subscales of the EDE-Q of restraint (R), eating concern (EC), shape concern (SC) and weight concern (WC). Global scores can range from 0 to 6. Internal consistency in the present study was excellent (Cronbach's alpha: Global EDE-Q = .95, R = .84, EC = .83, SC = .92, WC = .87).

2.2.2. Clinical Perfectionism Questionnaire (CPQ; Fairburn, Cooper, & Shafran, in preparation cited in Riley, Lee, Cooper, Fairburn, & Shafran, 2007)

The 12 item CPQ was used to measure clinical perfectionism over the past month on a 4 point Likert scale from 1 (not at all) to 4 (all the time). Scores range from 12 to 48. The CPQ has been validated in a sample of females in treatment for an ED and shown to have good reliability and validity (Steele, O'Shea, Murdock, & Wade, 2011), it had acceptable internal consistency in the present study (alpha = .76).

2.2.3. Rosenberg Self Esteem Scale (RSES; Rosenberg, 1965)

The 10 item RSES was used to measure self esteem. Participants answer five questions on a 4 point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The scores range from 10 to 40. The RSES had high internal consistency in the present study (alpha = .88).

2.2.4. The Tolerance of Mood States Scale (TOMS; Allen et al., in preparation)

Mood intolerance was measured using the 11 item TOMS which has two subscales; General (8 items) that assesses general components of mood intolerance and Eating (3 items) which measures behaviours specific to overeating. Each item is measured using a 5 five point Likert scale ranging from 1 (never) to 5 (always). The scale has reliability and validity in community and obese samples (Allen et al., in preparation). The general subscale had acceptable internal consistency in the present study (alpha = .77) however the eating subscale did not (alpha = .13) therefore it was excluded.

2.2.5. Social Adjustment Scale by Self Report (SAS-SR; Weissman, Prusoff, Thompson, Harding, & Meyers, 1978)

Interpersonal difficulties were measured using the 54 item SAS-SR which consists of six subscales: work, social and leisure activities, relationships with family, primary relationship, family unit and parenthood. The SAS-SR has acceptable reliability (alpha: = .74) (Weissman et al., 1978).

3. Procedure

Ethics approval was granted by the Human Research Ethics committee at Curtin University. The questionnaire was distributed online using social networking tools, an online student learning environment at Curtin University and personal contacts of the researchers. Participant information stated that the study was to understand factors that may lead to eating problems.

4. Results

4.1. Descriptive statistics

As seen in Table 1, our EDE-Q score of 1.83 was higher than the recovery cut-off of 1.74 used by Fairburn et al. (2009) in their evaluation of CBT-E. This is likely due to the 7.6% of our sample who had a Global EDE-Q score above 4 indicating extreme eating disorder psychopathology (Mond, Hay, Rodgers, & Owen, 2006). A proportion of participants also scored above 4 on Shape Concerns (26%), Weight Concerns (16.5%), Restraint (11.1%) and Eating Concerns (3.7%).

4.2. Structural Equation Modelling (SEM)

SEM, implemented through LISREL 8.8 (Joreskog & Sorbom, 2007), was used to test the model in Fig. 1. The model consists of the measurement component and the structural component. The measurement component proposes that clinical perfectionism (CP), core low self-esteem (SE), mood intolerance (MI), and interpersonal difficulties (ID) load onto a Maintaining Mechanisms factor; shape concerns (SC), weight concerns (WC), and eating concerns (EC) load onto a Core Pathology factor; and restraint (R) loads onto a factor of the same name. The structural component proposes that Maintaining Mechanisms has both a direct and indirect impact (via Core Psychopathology) on Restraint. The structural component therefore