



# Anxiety and compulsion patterns in the maintenance of bingeing/purging behaviours by individuals with bulimia nervosa

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**Keywords:** anxiety, bulimia nervosa, compulsion, coping strategies, purging, vomiting

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Accepted for publication: 15 June 2014

doi: 10.1111/jpm.12167

## Accessible summary

- Bulimia nervosa, if not treated or if treated unsuccessfully, can develop into a severe and enduring eating disorder.
- Analysis of self-management of Seed-BN indicates that individuals frequently experience significant negative mental health issues and a complex relationship with medication management.
- Two discrete patterns of coping strategies to prevent deterioration in distressing symptoms were in evidence, controlled vomiting, which was related to the management of anxiety, and uncontrolled vomiting due to more dominant self-management of compulsive acts.
- The implications for nursing revolve around accurate assessment of vomiting and subsequent engagement by the individual with their coping strategies in relation to perceived deterioration in distressing symptoms.

## Abstract

This paper reports on the results of a study into the self-reported coping strategies employed by a small sample ( $n = 12$ ) of individuals diagnosed with bulimia nervosa purging sub-type, severe and enduring eating disorder (Seed-BN), referred to an outpatient clinic for psychotherapy. Data collection focused on the vomiting activities of participants through analysis of their self-management from diary extracts, which recorded vomiting patterns. Participants all experienced significant mental health issues, had complex histories of BN over a prolonged period, difficulties maintaining relationships, and many had an additional history of substance misuse including dependence on prescription drugs. The study findings indicated two different self-management strategies, anxiety containment and compulsion maintenance. There was a clear association between anxiety and controlled weekly vomiting patterns compared with compulsion and daily vomiting patterns. The implications for nursing practice relate to the potential for assessment of differences in vomiting patterns to indicate self-management status and subsequent interventions focusing on either anxiety or compulsive patterns.

## Introduction

Bulimia nervosa (BN) is a high profile eating disorder, initially described by Russell (1997), and currently affecting approximately 3% of the population (McManus *et al.*

2008). It is characterized by powerful and intractable urges to overeat, and weight gain, the consequence of such binge eating, is thwarted by psychogenic vomiting, purging or periodic starvation to retain normal weight range (Lacey 1983). There are three essential criteria: 'recurrent episodes

of binge eating, recurrent inappropriate compensatory behaviours to prevent weight gain, and self-evaluation that is unduly influenced by body shape and weight' (American Psychiatric Association [APA], 2013, p. 345). The condition is considered severe when inappropriate compensatory behaviours occur 8–13 times, and extreme when 14 or more each week. It emerges in late adolescence or early adulthood, may persist over time, and, if unsuccessfully treated, becomes a severe and an enduring eating disorder bulimia nervosa (Seed-BN), frequently associated with anxiety and depression, particularly when purging behaviours are present (Robinson 2009). Purging behaviours, particularly self-induced vomiting, have received increased attention over recent years, both in the context of eating disorders and because of their own clinical relevance (Keel & Striegel-Moore 2009, Stephen *et al.* 2014). Self-induced vomiting was initially regarded as an undetected problem because of the high level of secrecy, but an early influential study suggested more than half (56.1%) of those diagnosed with BN vomited daily and a further 17.5% weekly (Fairburn & Cooper 1982). Significant knowledge improvements have since occurred, particularly around the adverse consequences of using vomiting as a means of weight control (Fairburn *et al.* 1986, Garfinkel *et al.* 1995).

This study presents the findings in relation to self-reported coping strategies employed by 12 individuals diagnosed with Seed-BN purging sub-type referred to an outpatient clinic for psychotherapy. Data were collected from diary extracts of vomiting patterns in order to examine the predominance of vomiting events, management strategies employed and implications for nursing assessment and treatment.

## Literature review

There is a marked association between BN and diagnoses of other conditions, particularly mood disorders, substance misuse, borderline personality disorder (Robinson 2009) and obsessive compulsive disorder (Thomas 2012); a number of individuals, furthermore, experience more than one eating disorder over the life course (Gilbert 2005). Purging behaviours are clearly elevated when borderline personality disorder (Murakami *et al.* 2002), depression or anxiety disorders are also present (Robinson 2009). There is evidence for purging behaviour acting as a means of coping (Nagata *et al.* 2000), with anxiety escalating as BN becomes more entrenched over time (APA 2013). Compulsive urges also appear to alter as the condition develops, with vomiting, characterized by acute lack of control in the early phase, evolving into impaired control as the condition becomes enduring. Cooper *et al.* (2000) suggest that obsessive thoughts are an invariable product of the individual

with BN constantly thinking about food, weight, diet and body image, and that these thoughts are often intrusive and negative, leading to distress and frustration. Excessive self-referential thinking reinforces anxiety and low mood states (Watson & Purdon 2008), which, when paired with uncontrollable urges related to negative beliefs, are important in the maintenance of BN and reinforce negative thinking around change and control (Cooper *et al.* 2009). Compulsions can be severe, intense, reinforce feelings of anxiety and extremely difficult to overcome, despite the damage to the individual's overall health (Robinson 2009). Purdon *et al.* 2007 highlighted how attempts to suppress or ignore obsessive thoughts and perceived loss of control over intrusive thoughts actually led to an increase in thought frequency, loss of concentration and increased anxiety generalized enough to engulf a person's functioning. Compulsion may serve to allay feelings of anxiety, albeit only temporarily (Green 2009), and impulsivity, in the context of BN, might serve to block unwanted emotions (Brotchie *et al.* 2007). Impulsivity is a predisposition towards rapid, unplanned reactions to internal or external stimuli with diminished regard to the negative consequences of such reactions (Chamberlain & Sahakian 2007), whereas compulsivity represents a tendency to perform unpleasantly repetitive acts in a habitual or stereotyped manner to prevent perceived negative consequences, leading to functional impairment (Hollander & Cohen 1996). These two constructs may be viewed as diametrically opposed, or alternatively, as similar, in that each implies a dysfunction of impulse control (Stein & Hollander 1995).

An early BN study proposed that increased purging behaviours were correlated with increased psychological disturbances and decreased compulsive control and may constitute a sub-type, multi-impulsive bulimia (Lacey & Evans 1986). Tobin *et al.* (1992) indicate 80% of people experiencing BN engage in purging behaviours, 16% vomiting alone, which often indicated severe additional mental health issues, as does laxative abuse alone (Pryor *et al.* 1996). Others suggest that vomiting patterns are within a continuum of BN symptom severities with purging by vomiting associated with increased psychopathological disturbance (Newton *et al.* 1993, Gilbert 2005). Treatment effectiveness for BN is difficult to accurately determine, though cognitive behavioural therapy, according to Walsh *et al.* (1997), is 'significantly more effective than supportive psychotherapy . . . in reducing the frequencies of binge eating and vomiting' (p. 529). Agras *et al.* (2000), investigating a sample with BN, where 50% also experienced lifetime depression, also concluded cognitive behavioural therapy (CBT) to be five times more effective than psychotherapy in reducing vomiting. Though, importantly, after 1-year treatment, the outcomes for CBT and interpersonal

psychotherapy are similar (Walsh *et al.* 1997). Fairburn *et al.* (1986) suggest the marked reduction in vomiting activity might result from education around body weight regulation, dieting and the adverse consequences of vomiting. Experience of depression and anxiety appear significant in the backgrounds of those with partial BN, with the use of alcohol and a chaotic family background prominent in those with full BN (Fairburn & Beglin 1990). The likely success of treatment depends on BN complexity, with associated substance misuse suggesting recovery likely to be prolonged (Wilson *et al.* 1999) and increased vomiting frequency greater than binge-eating in predicting poor outcome (Davis *et al.* 1992). There is also considerable evidence of increased vomiting activity when self-esteem is particularly low, depression is more pronounced and impulsivity is elevated (Keel *et al.* 2001, Watson *et al.* 2013). The role of impulsivity and its relationship to other elements, particularly low mood and poor self-concept is clearly complex, with Wu *et al.* (2013) arguing that the stopping component is impaired in BN. Impulsivity is characterized by 'actions which are poorly conceived, prematurely expressed, unduly risky or inappropriate to the situation and that often result in undesirable consequences' (Daruna & Barnes 1993, 23).

## Research questions

There has been little published detailed investigation into the symptomatic daily management patterns adopted by individuals with seed-BN or the inter-relation of behaviours such as overeating, self-induced vomiting and other purging events.

Three research questions were formulated:

- How influential are vomiting events in the lives of individuals with seed-BN?
- What coping strategies do people with this condition employ to sustain vomiting behaviours?
- How can nursing assessment and treatment be most effectively addressed for people with seed-BN?

## Design and methods

The study utilized a qualitative approach, which evaluated self-reported coping strategies and self-interventions through diary recordings of bingeing and vomiting. This approach was chosen because vomiting is not usually a public act, observations and measurements are impracticable, and self-monitoring can be effective in promoting behaviour change (Nelson 1977). Gilbert (2005) stresses the essentially secretive practice of vomiting so assessment is largely reliant on self-reporting, which by its very nature has varying reliability. Psychotherapy practice diaries are

commonly used to provide information for assessments, therapeutic progress and formulation reviews and provide guidance for client progress (Kinsella & Garland 2008, Westbrook *et al.* 2011). The diary constitutes 'an intensely personal document, symbolizing the relationship between therapist and patient; it may perhaps be described as a transitional object (providing) control and discipline throughout the week and a constantly available outlet for emotional feelings' (Lacey 1983, p. 1612).

## Sample

Participants comprised 11 women and one man, aged between 23 and 46 years of age and presenting with a history of Seed-BN of between 5 and 26 years, with an average of 12.6 years. A review of case histories indicated that all had achieved significant results on EDI I, EAT and Bul-t, indicating ongoing BN symptoms, and all were within normal or just above normal weight using the body mass scale, (BMI average 24.7). Three had a history of very low weight (self-reported as anorexia), one had a history of poor differential diagnosis, reassessment indicating complex diagnosis of BN with diabetes type-2 and enduring depression. All participants scored significantly on depression scales, and nine reported histories of prescribed antidepressant medication (two having additional treatment for diurnal mood swings); three had alcohol dependence, and two others used classified drugs (cocaine) at least weekly.

Seven participants reported marked anxiety levels prior to BN diagnosis, all had chronic physical complaints (five with varying degrees of osteoporosis, one with right-leg peripheral neuropathy, one with polycystic ovaries and three with poor dental health). All had a history of self-injury, comprising cutting, scalding and burning, eight had histories of suicide attempts and five had received inpatient psychiatric admissions. Nine had histories of familial abuse, five of a sexual nature and four physical. Nine had difficulties in maintaining relationships (two of whom reported no family abuse), while three were in long-standing relationships. All participants had undertaken a variety of different therapies including CBT, person-centred counselling, hypnotherapy, guided self-help, group therapy and support group activities. All had been prescribed Fluoxetine 60 mgs daily prior to attending the clinic. (See details on Table 1).

## Data collection

Diary recordings were analysed to ascertain whether there were any emerging themes related to self-management of resisting bingeing, frequency of vomiting and any dominant

**Table 1**  
Participant biopsychosocial histories

Biopsychosocial	No. of participants
History of very low weight	3
Diabetes Type 2	1
Enduring depression	12
Diurnal mood swings	2
Suicide attempts	8
Self-harming behaviours	8
Inpatient admissions	5
Anxiety disorder	7
Alcohol dependence	3
Cocaine use (at least weekly)	2
Osteoporosis	5
Poor dental health	3
Familial abuse	9
Inability to maintain relationships	9
Long-standing relationships	3
History of CBT/person-centred counselling/ guided self-help/support groups	12
Group therapy	3
Prescribed Fluoxetine	12

clinical presentations. The review focused on the coping strategies of 12 people referred to a severe and enduring eating disorders outpatient clinic for psychotherapy over a period of 2 years, 2007 to 2009. Selection screening included those who met Diagnostic and Statistical Manual of Mental Disorders, 4th Edition Text Revision (DSM-IV-TR 2000) 307.51 criteria for BN purging sub-types. Those scoring on borderline personality disorder scales (three clients) or meeting DSM-IV-TR bed criteria (four clients) were excluded from the study to strengthen the focus on those with BN presentation. Twelve individuals met the criteria and agreed to keep a diary recording vomiting events. Severe and enduring BN was defined as an eating disorder (bulimia nervosa) with more than 5 years of constant BN symptoms without remission and at least three previous psychotherapeutic interventions. The review criteria was devised with the focus on vomiting within a complex set of other presentation symptoms and included assessment of coping abilities and strategies for self-management of compulsion to vomit. Particular attention was paid to participant perceptions of vomiting events and diary recordings of their daily battles with intrusive thoughts and feelings of anxiety.

### Data analysis

The data were extrapolated from self-completed diary records, which were subject to thematic analysis following Braun & Clarke's (2006) framework for the scrutiny of qualitative data. This process involves an initial thorough familiarization with the full data set, followed by generation of initial codes and categories, then a process of

**Table 2**  
Coping strategies

Compulsion maintenance (Four clients)	Anxiety containment (Eight clients)
<b>Bingeing/Vomiting pattern:</b>	<b>Bingeing/Vomiting pattern:</b>
<ul style="list-style-type: none"> <li>• binged/vomited at least once daily</li> <li>• within any 7-day period would binge/purge two to three times daily at least twice.</li> </ul>	<ul style="list-style-type: none"> <li>• binged/vomited at least once weekly</li> <li>• never more than once a day</li> <li>• never more than twice a week</li> </ul>
<b>Coping strategies:</b>	<b>Coping strategies:</b>
<ul style="list-style-type: none"> <li>• urge to eat to excess was overwhelmingly strong</li> <li>• attempts to distract such urges led to both affective and physiological discomfort</li> <li>• alleviated only by a bingeing episode itself</li> </ul>	<ul style="list-style-type: none"> <li>• prepared for a bingeing episode in a controlled manner</li> <li>• could contain the pressure to binge</li> <li>• release of the tensions built up over any period within a few days through planned bingeing episode</li> </ul>
<b>Self-report measures:</b>	<b>Self-report measures:</b>
<ul style="list-style-type: none"> <li>• High scores on obsessive-compulsive scales</li> <li>• Significant scores on depression scales</li> </ul>	<ul style="list-style-type: none"> <li>• High scores on anxiety scales</li> <li>• Significant scores on depression scales</li> </ul>

searching for, reviewing and defining eventual sub-themes, which were consolidated into two dominant themes. Such thorough engagement with the diary records, despite the relatively small sample, did accommodate saturation, additional information being unlikely to generate new understanding (Liamputtong & Ezzy 2007). Separate, simultaneous data analysis demonstrated considerable consistency between researchers, guarded against bias and enhanced validity. Analysis of the material was further enhanced by the computer software package, MAXqda (Kuckartz 2001), effective in the storage and organization of qualitative data (Richards 2009) and particularly helpful in identifying recurring words through its lexical search function (Kuckartz & Sharp 2011).

### Ethics

All participants were provided with information about the study prior to giving consent to their diary recordings being subject to scrutiny for research purposes. Ethical approval was successfully sought from the University Faculty Research Ethics Committee, with the main concerns revolving around informed consent and the preservation of anonymity and confidentiality.

### Findings

Analysis of data indicated two distinctly different coping patterns to be present, anxiety containment and compulsion maintenance (see Table 2).

The main difference between coping strategies relates to self-perceptions of vomiting episodes with participants scoring highest on anxiety scales being those with more control over daily vomiting episodes, while those who were overcome by the urge to vomit once or more daily scored highest on compulsive responses (using attitudinal and situational questions). Participants who vomited at least once daily had diagnosis of BN for 4, 7, 8 and 15 years, respectively, suggesting that chronicity (APA 2013) may not be the main factor in controlling or delaying vomiting episodes or decreasing uncontrollable urges.

### Anxiety containment

The two coping strategies were significantly different in manifestation. Anxiety containment involved the individual consciously trying to control the vomiting pattern, containing anxiety through a task analysis of the planning and implementation of a vomiting episode. Preparation frequently included shopping beforehand and ensuring the availability of the right foods to minimize physical discomfort. A risk-management approach was adopted, comprising taking steps to avoid being caught, ensuring they were alone, checking that partners or children were out or asleep and organizing sufficient time to binge, vomit, clean and shower. Forward planning was required, including hiding money for food, pre-planning shopping time and choosing appropriate clothing (loose fitting, easily washable, normally dark coloured to hide stains). This pattern, centring on the vomiting activity, was assimilated into daily life, the planning process provoking anxiety through fear of the unexpected, such as lack of finances or sudden arrival of visitors. Time management, food shopping, laxative acquisition and vomiting were carefully hidden, executed discreetly and recorded with shame and guilt. Vomiting episodes were planned and led to an immediate reduction in tension, although guilt and depression were reinforced. The contradictory elements of preparedness, determination, emotional confusion and attempted resistance are reflected in the following quotes.

Unfortunately I gave in to temptation today and bought laxatives – fybogel. I had quite a good tea, tomatoes, mushrooms, a roll, but then had some sesame sticks, Bombay mix and crackers. So threw up the lot. Felt like I really wanted to scream and bawl because I am so mad with myself, but I couldn't. (p. 12)

I wish that I could overcome this battle that I constantly have . . . I have known that I was going to fail today, that's what the last couple of days have been about, I knew I would have time to myself, and I felt awful and huge. I went straight to Superdrug and

bought laxatives and made myself sick as soon as I got home. Half annoyed that I had given in, but bloody determined to get back to the right weight as soon as possible. (p. 1)

I'm still not eating normally, no laxatives or vomiting, which is a good thing, but how long can I keep it up? Right now I feel FAT, UGLY and BLOATED. I've made all these promises to eat etc, I thought it would be easy, god I'm still in a mess, I am itching to lose weight, but I know that I mustn't make myself sick, though how long can I withstand temptation? (p. 1)

The build-up to an episode of bingeing and vomiting entailed the battle with contradictory emotions, such as self-disgust and underlying anger; these were ultimately resolved, though, by the desire to control weight and dominate the scales:

. . . today I feel extremely fat and bloated, my stomach is huge and I'm panicking, but I resisted doing anything about it'. (p. 3)

I know I have a lot going for myself and I know that I am well liked – why can't I like myself and why do I punish myself like I do?' (p. 7)

I only get wound up if the scales don't say what I want them to . . . I am so annoyed with myself, I really am. I feel so tired. Why, oh why, do I do this? I feel like saying stuff it, and eat properly. However, when I do this, I get so wound up that I drive myself insane and feel very, very sick. I can't seem to win at all, no matter what I do. What a bleeding mess I am in. I'm a stupid, stupid cow and hate myself for it'. (p. 5)

Feedback around self-management suggests that when clients adopted an anxiety containment approach, they recorded increased tension and hyperawareness of how they felt during the day. Hyperawareness included a heightened sense of low mood, apprehension, anxiety, headaches, irritability, lack of motivation and elevated tension-related symptoms such as headaches, muscular tensions, gastric discomfort, palpitations and sleeplessness. Negative automatic thoughts were frequently reported, usually around self-worth and confidence in dealing with life, with vomiting utilized as a means of reducing anxiety, anger, guilt and low mood. Resolution was always short-lived, the positive feelings gained through vomiting maintained briefly before increased awareness. The dominance of thoughts about food, together with feelings of exhaustion and the beginnings of an approach, which would result in bingeing and purging, is illustrated in the following quote:

Ate some tea, a cup of soup, tomatoes and mushrooms with a lot of bread. Feeling very bloated and my head is

swimming with: what shall I eat, when shall I eat, want to lose weight, need to get rid of all this fat around my stomach etc. Yet when I go to bed, I feel knackered. Resisted being sick but took three laxatives, no effect though'. (p. 10)

### Compulsion maintenance

The participants engaging in daily vomiting reported less anxiety but more compulsive traits, their resolution to resist vomiting lasting no more than a few hours before physical comfort became overwhelming (Cooper *et al.* 2000); more deceit and concealment was involved than with the anxiety containment group. Intrusive thoughts about food, eating and body image were almost constant, the compulsion to act becoming extremely difficult to resist (following Robinson 2009). Vomiting was more opportunistic, involved more risk taking, such as eating more openly with work colleagues and continuing once others had finished, would be self-induced, usually in the toilets. Participants reported bingeing at home when others were out and during the night, with associated risk-taking revolving around replacing foodstuffs, concealing food and sometimes money. Alcohol consumption frequently involved binge drinking, resulted in family arguments, reinforced poor self-esteem and attempts to counteract or resist were regarded as likely to fail from the onset.

Even as I was walking to the off-license and thinking about what to buy, I was trying to convince myself that I wasn't going to drink, that it was just in case things got too bad'. (p. 4)

I should have been racing today but it got cancelled because of the weather. My friend came round to paint the house so I went to the cemetery and was very frustrated because nobody had been . . . I find this very hard to understand and so I am very annoyed. I called my mother today as she is supposed to be calling round tomorrow and as it turns out she has been to casualty again with a kidney infection and won't be coming round as she is not well but she is fucking well enough to go to work today. I don't know why I bother with anything and I just feel like getting pissed. The only thing that did cheer me up a little is my sister in law called me as she knows it was my dad's birthday . . . I am very tired and just want everything to be all over as I am tired of fighting and there is only my dad that understands anything'. (p. 8)

And the following day,

. . . all I feel like doing is sleeping and this evening I have had two bottles of wine but don't feel drunk'. (p. 8)

Participants also discussed past therapeutic interventions, which had confirmed their perception that compulsive urges were too strong for any attempt at self-management and that past therapy appeared to have increased the severity of the symptoms. Previous experience of failure reinforced negative thinking about self-control abilities (following Cooper *et al.* 2009). This sense of hopelessness appeared to reinforce low mood and low self-worth, and participants consistently reported that the compulsion was addictive-like rather than a form of coping. They all experienced and resented the intrusive obsessive thoughts and compulsive behaviours that burdened their daily lives:

I'm in a mixed mood about food – still up to my old tricks. I wish that I could stop, how much more will my body take? I almost always make myself sick every day. It is too easy for me to do this, all I have to do is tense my muscles now, don't need to put my fingers down my throat AND I can do this very quietly. How disgusting. I feel so sick after food. What a bloody mess again. Everything else is fine though'. (p. 6)

Today was an absolute waste. All work intentions fell flat, did a lot of head work, absolute stinker for food and throwing up – daren't write it down, feel really disgusted and angry with myself'. (p. 4)

Insight and self-knowledge were problematic, participants being selective about what they revealed, self-deceptive about the severity and rewarded by feeling better about vomiting:

Saw mum and dad today . . . we joked and then I told them that I was managing ok – what a liar, manipulative and deceitful . . . still making myself sick, virtually every day. I never lie to them about my weight. I may hold back about my feelings'. (p. 8)

At the moment my bulimic side is definitely winning, all my old habits are dominant, hence my awful behaviour each night. I need to be alone, even though I then think more, I can't get rid of the awful feelings that I have about myself; the guilt, anger, frustration and hatred . . . What a pickle I put myself through time and time again'. (p. 9)

I know I am not being totally honest with anyone, including myself, about how often I make myself sick, but it does make me feel so much better about myself and gives me a lift. I ate lunch today and everybody saw me, which also makes me feel good. I just don't feel like talking at the moment, because I feel so guilty and ashamed of not being able to beat this'. (p. 2)

The compulsive pattern of vomiting appeared to be associated with more confused and contradictory thought

patterns, fear of the consequences of the binge/vomit cycle, distorted self image, insight into one's own behaviour and motivations, all conspiring to propel the individual onward in the self-destructive cycle. The more convoluted relationship with vomiting behaviour emerges in the following quotes, the self-knowledge revealed in the first suggesting an existential component, while the second hints at the anger underpinning evident low mood:

At the moment I feel very vulnerable towards giving in to the part of me that says 'go lower' . . . I think that I feel like this because I think that once I start to eat I am losing control and will become fat again. I know that I cannot cope with people saying that I look well – to me this is fat. Then I begin to feel fat and look fat. As much insight that I have, I get so frustrated with the way I think and feel. I get scared at the thought that one day this will kill me. I certainly don't have a death wish. On the contrary, I have so much that I want to do. I think that I can only achieve my goals if I can control my eating and be thin. It is true, bulimia is a principle of life, almost aesthetic. Without it, I could not exist. What irony because with it I may not exist! I do have hope that one day I will be free of it. I will be a healthy weight, fit and able to have children. Why then do I continue on this path of self-destruction? If only I could change my habits of what now seems like a lifetime. (p. 9)

He (therapist) was so reassuring but also surprised me by saying that I give the impression of being sad. I said that I wasn't, just wound up and felt that I was going nowhere with this damn thing . . . I just feel so out of control. (p. 6)

## Discussion

The severity and enduring nature of seed-BN exacerbated over time, participants becoming increasingly helpless to resist thoughts about weight and food (following Purdon *et al.* 2007) and the short-lived relief from vomiting being undermined by self-disgust and shame precipitating further bingeing and vomiting. Compulsive, daily vomiting involved an element of negative learning, poor control over vomiting urges, despite previous therapy experience, paradoxically resulting in decreased discomfort. Vomiting helped deal with unwanted symptoms and inculcated a belief that it actually ameliorated feelings of escalating physical and affective distress [similar to obsessive-compulsive disorder reinforcing over time negative feelings about change and control, according to Cooper *et al.* 2009]. Diminished self-management capability reinforces poor symptom management, which provides greater emo-

tional comfort than the discomfort arising from trying to improve personal levels of control. Participants vomited more frequently, which consequently helped to relieve unpleasant mental and physical awareness. The chronicity of the Seed-BN condition also appeared to have formed an entrenched pattern where daily vomiting became the maintenance mechanism, and, similar to addictive patterns, the vomiting was habitually used as a coping response to low mood, physical discomfort and poor self-esteem (following Einstein & Menzies 2006).

Compulsive maintenance approaches did not appear to be the same as anxiety containment strategies, but instead appeared to entail different vomiting patterns, coping strategies and self-management. Effective assessment of increased vomiting is a further method of gaining information about psychopathological severity, which is closely associated with poor response to treatment and can aid the nurse in deciding the most appropriate intervention. Assessment of patterns of vomiting indicating decreased control of compulsive behaviours or increased severity of anxiety symptoms may also provide additional evidence to support comorbid diagnosis as well as indicating the most appropriate and relevant psychotherapeutic focus. If a client, for example, with compulsive maintenance symptoms, increased vomiting behaviours during treatment, it may give an indication that the individual feels the control element of their condition is diminishing, and underlying fears of increasing distressing symptoms may dominate thinking. Conversely, if the incidents of vomiting decrease then it would give an indication that the client was gaining more control of impulsive or compulsive drives and may be ready to manage the fears around managing distressing symptoms.

Based on two different coping mechanisms to manage vomiting, it seems reasonable to assume that individuals presenting with anxiety containment BN differ in their bulimic experiences and behaviours from individuals presenting with compulsion maintenance BN. This includes differences between the levels of anxiety and compulsive behaviours and self-management responses. Deferred gratification was found in the study to be utilized as a control mechanism until stress was deemed to have reached a level requiring tension release, albeit short-lived (Green 2009), with hyperawareness of physical symptoms utilized as a monitoring tool. Participants with compulsive maintenance BN had higher levels of compulsive traits and depression, while anxiety containment BN appeared to indicate more anxiety, less OC traits and higher anxiety–depression. Nurses may need to take more account of diary records of vomiting as they provide guidance to the type of self-management strategies adopted by individuals dealing with seed-BN.

It appeared that the entrenched planned strategies adopted by individuals who held anxiety containment patterns provided a method of controlling BN physical symptoms alongside increased anxiety levels and depression. However, individuals with compulsive maintenance patterns developed strategies, which responded immediately to compulsive urges in order to prevent worsening physical symptoms. The importance for nursing interventions lies in the potential for both to be viewed as different coping mechanisms, and, therefore, requiring different therapeutic interventions with nursing treatment based on the most dominant of the comorbid condition. Another important aspect for nursing intervention is in the fact that complex comorbidity does appear to play an important part in the development of chronicity. Consequently, unsuccessful nursing interventions will have developed a heightened sense that interventions will instigate further distressing symptoms avoided through vomiting behaviours. Nursing intervention should take account of the physical aspects of bulimia nervosa and provide relevant physical symptom assessment and alleviation, because an increase of physical discomfort may lead to worsening vomiting behaviours as a self-management strategy. An individual, for example, who increases compulsive vomiting without other symptom deterioration, may be attempting to prevent developments of other distressing physical symptoms arising from self-management. Similarly, the individual who engages in a single significant binge event followed by vomiting may also be attempting to prevent a worsening of the physical aspects of anxiety such as headaches, tension and nausea. Nursing interventions also need to take account of whether self-management of BN is anxiety or compulsive based as they may provide indicators for treatment progression and future intervention strategies. Participants with anxiety containment approaches may be better supported if they work within group, while individual session focuses on anxiety management using cognitive-behavioural approaches. Participants with compulsive-maintenance strategies may respond to individual sessions focusing on reinforcing abstinence strategies and management of addictive behaviours allied to group work. Maintenance support needs to be planned and implemented over a medium to long-term time period (up to 12 months) supported by fortnightly group sessions.

## Limitations

Reliability of self-reporting constitutes a clear issue, though participants were keen to record honestly, which is reflected

in the level of insight and self-knowledge demonstrated, and diary recordings provided a rich source of data. A second issue relates to the absence of research in the area of Seed-BN, particularly around its symptomatic complexity, though this is likely to improve as more studies are undertaken. Finally, generalizability is always difficult with small samples, though it is believed that the study does have something significant to say about different coping strategies for Seed-BN.

## Conclusion

The first strategy, anxiety containment, involved the individual consciously controlling their vomiting patterns by breaking down episodes into task-orientated exercises comprising a complex interplay of activity, time management and discreet execution. The second, compulsion maintenance, revolved around increased levels of inner tensions relieved by daily vomiting, and constituting a self-repeating cycle. In other words, some individuals with a seed-BN condition appear to self-manage the prevention of actual or perceived deterioration in distressing symptoms through vomiting behaviours which may not match changes in other symptomatic behaviours.

Two issues arise from this study, the first suggesting that if Seed-BN has a strong anxiety comorbidity, then the increase in anxiety symptoms is managed through intense vomiting events, which occur when a certain level of tension require release, and this can take several days to materialize. The second issue suggests that if the seed-BN condition is related to OC comorbidity, then an increase in vomiting patterns occurs much more frequently. In both seed-BN anxiety containment and compulsive maintenance behaviours, the intention is to prevent further deterioration in distressing symptoms. It appeared that the entrenched planned strategies adopted by individuals who held anxiety containment patterns provided a method of controlling BN physical symptoms alongside comorbid anxiety levels and depression. However, individuals with compulsive maintenance patterns developed strategies based on interventions, which responded immediately to compulsive urges in order to prevent worsening physical symptoms. Increased or decreased vomiting patterns without significant changes in other symptoms provide guidance to the nurse on whether the individual is attempting to prevent further distressing psychophysiological symptoms or is gaining the strength and motivation to manage the bulimic condition.



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