Program Proposal: Guided Self-help Bulimia Nervosa Program Delivered in Primary Care

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Project
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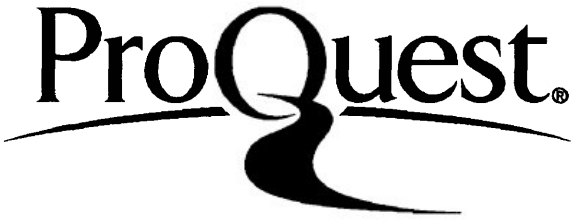

Abstract

Bulimia nervosa is a complex emotional and physical illness that presents challenges for primary care providers in identifying and supporting individuals with this eating disorder. Many patients experience difficulties in accessing specialist psychological treatments. In particular, mature patients and those in rural settings may find significant barriers to cognitive behavioural therapy delivered in specialist settings. Guided self-help administered in primary care can be an effective first step in the treatment of less severe bulimic patients. This project provides a literature review on the efficacy of self-help treatments for bulimia nervosa, outlines a conceptual framework for more intervention at the primary care level, and proposes a program to develop and implement a guided self-help tool for the treatment of bulimia nervosa in primary care.

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Statement of the Problem

Cognitive-based therapy (CBT) is widely considered to be the treatment of choice for individuals diagnosed with bulimia nervosa (BN); however, access to therapists can present barriers to treatment resulting in a low proportion of afflicted people seeking help (Hay, 2005; Welch & Fairburn, 1994). CBT has been demonstrated as more effective than non-directive therapy, focal psychotherapy, psychodynamic treatment, stress management, and anti-depressant medication (Agras & Apple, 1997; Hay, 2005); however, both group and individual approaches of CBT can pose organizational and logistical issues for patients. A lack of trained individuals may make access to this type of therapy nearly impossible in rural and remote non-specialist centres. Further, shortages of specialist treatment services in urban centres can mean significant wait times to therapy.

Guided self-help (GSH) and computer-aided interventions administered in primary care can be an effective first-step in the treatment of less severe bulimic patients presenting to a general practitioner or other health professional. Guided self-help can also offer a full comprehensive course of treatment to patients who are unable to overcome barriers to specialist treatment. Impediments to therapy can include a short supply of skilled therapists with CBT competence (Ghaderi, 2005), patient shame, and perceived and actual inaccessibility of specialist treatment due to a lack of time availability, cost, and geographic factors (Turnball et 1996; Banasiak et all. 1998).

Mature women with BN, defined for the purpose of this project as 30 years of age and older, is a group at particular risk for facing barriers to treatment. While group therapy programs and individual CBT offered during traditional clinic daytime hours may better address the needs of adolescents or college-aged women, these programs may be prohibitive for older patients with extensive responsibilities both within and outside the home, particularly if the woman is a single parent. Older individuals may also feel shame associated with group therapy in the company of adolescents and be more likely to withdraw from treatment. Also, some older women may take on maternal roles for younger girls in group therapy when they should be focusing on themselves. As the disorder itself can sometimes be characterized by embarrassment and secretiveness, some women may find guided self-help delivered in primary care useful as a first-line treatment. The discipline needed to adhere to self-help treatment may also be more suitable to a more mature population of patients that more easily recognizes the imperative to regain control of their eating habits.

Objectives

The purpose of this project is to:

1. Summarize a literature review conducted on the efficacy of self-help treatment for bulimia nervosa,
2. Describe a) the role that GSH delivered in primary care could play for older patients or those with barriers to CBT delivered in specialist settings and/or b) as a first step during waiting time from referral to treatment,

3. Outline a conceptual framework and propose a program for GSH delivered in primary care as a means of increasing accessibility of therapy and improving service delivery.

Background

BN is an eating disorder characterized by eating binges followed by excessive means to purge calories with methods of self-induced vomiting, laxative and/or diuretic abuse, prolonged fasting and extreme exercise. The majority of patients are normal weight or are overweight (Foster, 2005).

The Diagnostic and Statistical Manual of Mental Disorders (2000), Fourth Edition (DSM-IV) describes the diagnosis of BN as follows:

Recurrent episodes of binge eating, characterized by the following:

- Eating an amount of food, in a discrete period of time, that is larger than most people would eat in a similar period of time under similar circumstances,
- A perceived lack of control over eating during the episode of binge eating,
- Recurrent inappropriate compensatory behaviour used to prevent weight gain,
- Occurrence of binge eating and inappropriate compensatory behaviours on average,
- Self-evaluation unduly influenced by body shape and weight,
- Does not occur exclusively during episodes of anorexia nervosa.

Specify type:
Purging type: during current episode, the person has regularly engaged in self-induced vomiting or misuse of laxatives, diuretics, or enemas

> Nonpurging type: during current episode, the person has used inappropriate compensatory behaviours, such as fasting or excessive exercise, but has not engaged in self-induced vomiting or the misuse or laxatives, diuretics, or enemas.

BN may present many medical complications. Electrolyte abnormalities due to vomiting and laxative abuse can put sufferers at risk for cardiac arrhythmia. Other potential life-threatening complications include gastric or esophageal rupture, Mallory-Weiss tear, pneumomediastinum, and post-binge pancreatitis from gorging and vomiting (Foster et al., 2005). The following is a table (Williams et al., 2008) outlining medical complications of both Anorexia and Bulimia Nervosa.

Table 1: Medical Complications of Eating Disorders

Williams, Goodie, Motsinger (2008)

Complication type	*Anorexia nervosa*	*Bulimia nervosa*
Cardiovascular	Arrhythmias	Arrhythmias
	Bradycardia	Diet pill toxicity (e.g., palpitations, hypertension)
	Conduction defects (e.g., QTc prolongation)	Emetine cardiomyopathy (ipecac syrup)
	ECG abnormalities (e.g., low voltage, T-wave inversions, ST-segment depression)	Mitral valve prolapse
	Hypotension	Peripheral edema
	Mitral valve prolapse	
	Peripheral edema	
	Sudden death	
Dermatologic	Carotenosis	Russell's sign (i.e., calluses on dorsum of hand from purging)
	Dry skin, brittle nails	
	Lanugo	
	Starvation-associated pruritus	
Endocrine	Amenorrhea	Amenorrhea
	Hypercholesterolemia	Hypoglycemia
	Hypercortisolemia	Irregular menses
	Hypoglycemia	Mineralocorticoid excess
	Impaired temperature regulation	Osteopenia
	Infertility	
	Neurogenic diabetes insipidus	
	Osteopenia/osteoporosis	

	Thyroid abnormalities	
Gastrointestinal	Abnormal liver function tests Acute gastric dilation from refeeding Bloating/fullness Constipation Delayed gastric emptying Refeeding pancreatitis Slowed gastrointestinal motility	Acute gastric dilation Cathartic colon Constipation from laxative abuse Dental erosion Esophageal rupture Esophagitis Gastroesophageal reflux Mallory-Weiss syndrome Parotid gland swelling Post-binge pancreatitis
Hematologic	Anemia (normocytic, normochromic) Decreased erythrocyte sedimentation rate Mild leukopenia with relative lymphocytosis Thrombocytopenia	None commonly associated
Metabolic	Dehydration Electrolyte imbalance Increased serum carotene Refeeding syndrome	Dehydration Electrolyte imbalance
Neurologic	Cognitive impairment Pseudoatrophy (i.e., enlarged cerebral ventricles and external cerebrospinal fluid spaces) Seizures	Cognitive impairment Cortical atrophy, ventricular enlargement Peripheral neuropathy
Pulmonary/mediastinal	Decreased pulmonary capacity	Aspiration pneumonitis Pneumomediastinum precipitated by vomiting Pneumothorax or rib fractures
Renal	Increased blood urea nitrogen concentration Renal stones	Increased blood urea nitrogen concentration Renal stones

QTc = corrected QT intervals; ECG = electrocardiography.

Qualitative studies illustrate women overwrought with obsessive thoughts of bingeing, merciless self-criticism, loneliness, and indistinguishable lines between emotions and food. In one study, a 46-year-old business executive described living with the disorder as "I felt like I didn't have anything without it. It was a part of me and what I needed to do" (Orbanic, 2001). In the same study, a 36-year-old health care

professional said: "[Bingeing, purging, and exercising were] almost choiceless, there's nothing to do but that... [It was] a cycle I couldn't get rid of. ... I had been doing it as long as I could remember... just kind of self-functioning; I just did it day after day. Someone needed to say I had done enough, I was sick enough, and I had to stop."

Epidemiology

It is widely believed that anywhere from 1% to 10% of women suffer from BN (Foster et al., 2005, Orbanic, 2001, Treasure et al., 1994). An epidemiological study of a Canadian non-clinical sample using Mental Health Supplement data to the Ontario Health Survey (Garfinkel et al., 1995) showed a lifetime prevalence of BN as 1.1% for female subjects and 0.1% for male subjects. The survey used a multistage, stratified sampling design in which 42 provincial public health units were divided into urban and rural strata. As there was a particular interest in young adults, sampling of 15-24 year old subjects was triple the probability of all other age groups. Interviews were conducted with 4,285 female subjects and 3,831 male subjects under the age of 65. The subjects with full and partial syndrome BN showed significant vulnerability for mood and anxiety disorders. In the full-syndrome group, high life-time rates of alcoholism were prevalent. In both groups, rates of parental psychopathologies were high but tended to be higher in the full syndrome group. Both groups were significantly more likely to have experienced childhood sexual abuse than a female comparison group not suffering from bulimia. The study's authors concluded that earlier prevalence reports (1% of a population) were validated by this Canadian sample and that co-morbid diagnoses were based on sound methodologies.

Needs Assessment for Older Patients

A rise in women older than 30 developing and living with eating disorders has been recently identified and is not well understood, studied in the literature or quantified. Further the therapeutic field has not widely begun to tailor treatment for older women (PBS, 2006, McAlpine, 2006, Bouchez, 2003, McLelland, 2007). BN is often unreported and is frequently associated with adolescence and early adult-hood. As a result, there are few reliable studies to document how many older women experience this problem, but data from some American treatment centres shows a steady increase, in some cases amounting to 20 per cent of its patients (Associated Press, 2007).

Dr. Donald McAlpine (2006), a psychiatrist and the director of eating disorders services at the Mayo Clinic in Rochester Minnesota, outlines how characteristics of eating disorders in older women differ from young women. While younger patients are more motivated by excessive concern with weight, shape and body image, older women may binge and purge to cope with mood. Stress factors that are common catalysts for the onset or re-emergence of eating disorders in later-life include:

- Relationship issues
- Divorce
- Parenting Trouble
- Death of a parent
- Career stress
- Financial strain
- Empty nest syndrome

- Menopause
- Fear associated with aging
- Desire to look younger and slimmer

While the rise in eating disorders in an older group of women is troubling, this group is thought to be more apt to seek professional help. They are considered more open to recognizing the problem and motivated to change (PBS, 2006). At the same time, response to treatment appears to be better when the condition is treated earlier in life.

Women who have suffered for years may find it difficult to exist without the binge/purge coping mechanism (McAlpine, 2006). Dr. Bart Blinder, director of an eating disorders program at the University of California, Irvine, concurred, "It's a tension relief, anxiety relief, a mechanism of dealing with loneliness and separation" (as cited in Morris, 2004). Outpatient staff at the Renfrew Centre, a network of treatment centres in the Eastern US (Associated Press, 2007), notes that women older than 30 who seek treatment tend to fall into three categories. Some have had an eating disorder for years since adolescence. Others had a disorder in remission that resurfaced because of new stress in life, such as a divorce or loss of a parent. The smallest of the three groups includes women who develop an eating disorder late in life.

Literature Review

Self-Help Treatment Defined

Self-help therapies have been shown to be effective in reducing mental health problems (Cuijpers, Apodaca, den Boer, Anderson, & Spek as cited in van Straten et al., 2008). A self-help therapy can be defined as a standardized psychological treatment that the patient works through independently at home (van Straten et al, 2008). Delivered in book format, it is also called "bibliotherapy." However, other media, such as CD-ROMs, television programs, videotapes, and increasingly the Internet are also used for delivery. Guided self-help (GSH) is facilitated through small amounts of assistance from a health care professional. Pure self-help (PSH) is independently administered by the patient. Factors such as the degree of guidance provided, the optimal balance between activities that teach cognitive behavioural techniques and the design of materials to effectively engage a patient vary widely. GSH has been used successfully to treat specific disorders such as bulimia nervosa, depression, panic disorder, social phobia, general anxiety disorder, and posttraumatic stress disorder, and most are based on cognitive behavioral therapy (Savage, Sorby, Troop and Scogin, as cited in Treasure et al., 1994 and van Straten, 2008).

Guided Self-Help for Bulimia Nervosa in Specialist Settings

A comparative study conducted in Vienna, Austria of self-help treatment versus CBT group therapy for BN (Bailer et al., 2004) demonstrated a relatively equivalent impact on the reduction of eating and purging behaviour in both treatment groups. Eighty one patients with BN were randomly assigned to either a self-help manual with a

maximum of 18 short weekly visits (guided self-help) or to 18 one and a half hour sessions of group CBT. The primary outcome variables tested were monthly frequencies of self-reported binge eating and vomiting episodes. Secondary outcome variables were eating disorder-related psychopathology as measured with the Eating Disorders Inventory and depression assessed with the Beck Depression Inventory. The data demonstrated that both guided self-help and CBT had a significant impact on reducing binge eating and purging. In the group which completed therapy, all patients assigned to the self-help condition showed an overall tendency toward continued improvement in abstinence rates, from 4.3% at the end of treatment to 30.4% at follow-up. At the one-year follow-up, the self-help group had higher recovery rates and lower remission rates than the CBT group. The researchers surmised that it is possible the self-help group made greater gains by continuing to work with the self-care manual once the sessions ended. As CBT was delivered in a group setting, comparison to individual psychotherapy efficacy studies is not possible. The results for the CBT group in this study were much poorer than other comparison studies with a recovery rate of 2% and a remission rate of 36%. One potential reason is the percentages of major depression and antidepressant use were significantly higher in the CBT group. As a result, these patients may have had a higher risk for less desirable treatment results.

The findings of the Bailer study (2004) concurred with a German study (Thiels et al., 1998) in which the guided self-help group caught up in gains to the CBT group at follow-up. Again, it was hypothesized that the change was related to the accessibility of the self-help manual once therapist-aided sessions ceased. In this study, sixty-two

patients were randomly assigned to 1) use of self-care manual plus eight bi-weekly CBT sessions or 2) 16 sessions of weekly CBT. At the end of treatment and at follow-up (average of 43 weeks after therapy), substantial improvements were seen in both groups on the main outcome measurements of eating disorders symptoms.

Self-Help Treatment for Bulimia Nervosa in Primary Care Settings

Guided self-help treatment for BN has also been evaluated in primary care treatment settings (Banasiak, 2005 & Durand & King, 2003; Walsh et al., 2004) to gauge the efficacy and efficiency of treatment delivered by general practitioners in the normal course of their practice. In the Banasiak (2005) study, 109 women with full syndrome or sub-threshold BN were randomly assigned to a GSH (n=54) and Delayed Treatment Control (DTC) (n=5) with outcomes compared at 17 weeks. The GSH group was reassessed at three and six months following the end of treatment. The GSH treatment group used the self-help manual by Cooper (1995), *Bulimia Nervosa & Binge-Eating: A Guide to Recovery*. Part 1 includes psycho-educational information about BN and Part 2 outlines a 6-step, sequential, self-treatment program with cognitive behavioural strategies. Each participant received an initial 30-60 minute session with a general practitioner (GP). Over the next 16 weeks of self-directed program completion, the GP provided support through normal course of their clinical practice in nine treatment sessions of 20-30 minutes each. These sessions included assessing and monitoring progress by reviewing homework, discussing and resolving identified issues, and jointly setting goals for the next session. At the end of treatment, the GSH group showed significantly greater improvement in all eating pathology and body image variables than

the DTC group. The mean frequency of binge episodes was reduced by 60% in the GSH group compared with 6% in DTC. Similarly in those who reported some form of purging behaviour at baseline, there was a 61% reduction for the GSH patients compared to 10% for those assigned to DTC. There were significant improvements in depression, anxiety, satisfaction with life and social adjustment in GSH relative to DTC. There were no significant differences to Body Mass Index observed. Absolute remission from purging behaviours, bingeing and all compensatory behaviours were significantly greater in GSH than DTC.

In the study by Agras et al (2000), treatment gains were maintained at the three and six month follow-up. In the intent to treat group, 28% in the GSH condition had recovered from BN, which compares favourably to 29% in 19 individuals in a CBT condition. Bulimic symptoms and body dissatisfaction measures showed substantial decline; however, lesser effects were observed on body image measures that indicate core psychopathology of eating disorders. Participants ranked the evaluation of their GSH treatment moderately high suggesting acceptance of this treatment option.

While many studies have found the GSH approach to be efficacious in clinic or community settings, two other studies in primary care produced disparate findings (Durand & King, 2003, Walsh et al., 2004). British researchers Durand and King compared the effectiveness of a general practice-based, self-help approach to the treatment of BN with that of specialist outpatient treatment. In a prospective, parallel group, randomised controlled trial, 34 patients were allocated to a self-help intervention and 34 received specialist treatment in a clinic. The main outcome

measure was the Edinburgh Bulimic Investigatory Test score assessed at six and nine months. The self-help patients were advised to work through a copy of *Bulimia Nervosa: a guide to recovery* while keeping in regular contact with their GP. The manual contained a structured six step program based on CBT strategies including 1) monitoring eating, 2) instituting a meal plan, 3) learning to intervene to prevent bingeing, 4) problem-solving, 5) eliminating dieting, and 6) challenging beliefs about weight and shape. In the specialist group, patients attended a clinic managed by a consultant psychiatrist and staffed by psychologists, nurse specialists and dieticians. Over the time of the trial, patients in the self-help group saw their family doctors a mean of 4.9 times, and those in the specialist intervention arm saw a specialist a mean of 4.8 times. An intention to treat analysis showed that bulimic symptoms declined in both groups over time and that there was no statistical difference in outcome between the two groups, nor was there a difference in perceived helpfulness of treatment between patients.

GPs supporting the self-help patients reported the manual to be useful in improving their understanding of BN. They perceived that patients benefited from the continuity of care and that outcomes included improved general well being, reduced symptoms, and increased insight. The main difficulty cited by GPs was the time constraints of their practice. From the patient point of view, while GPs were generally helpful, some patients mentioned time demands affected their GP's ability to help them. Some suggestions included longer appointments, GP training, involvement of other professionals, alternate hours for appointments, and meeting with other patients with similar problems.

Walsh et al. (2004) failed to detect benefits of self-help in a trial designed to determine whether treatments known to be effective for BN in specialized treatment centres could be used in primary health care settings. They examined two treatments for BN: 1) Fluoxetine, an antidepressant, and 2) guided self-help. Ninety-one females were randomly assigned to one of four treatment conditions: 1) placebo alone, 2) Fluoxetine alone, 3) placebo and guided self-help, and 4) Fluoxetine and self-help. After an initial treatment visit, patients in the self-help group met with a nurse who gave them the self help manual and instruction. In addition to monthly physician visits of 15 minutes each, the patients were scheduled to see a nurse for six to eight sessions. The majority of patients did not complete the treatment trial with only 30.8% completing the full-course. Many patients found the program too demanding and yet others indicated it wasn't intensive enough. Significantly less attrition was noted for the drug therapy group than the placebo group. There was no difference in attrition between the GSH group and the Fluoxetine only group. In this case, the researchers were unable to detect any significant benefits from GSH. The disparity from other positive results for GSH was attributed to study designs using waiting list control groups which provided no therapy to the patients but could have contributed to an expectation to improve and plausible rationalization for improvement in the GSH group. The low rate of study completion also hampered the statistical power of the study to detect differences. Other reasons for limited self-help benefits in this study may be attributed to the content and design of the self-help manual, a higher degree of disease severity, and a lack of follow-up for those who withdrew from treatment.

Although quantitative measurement is essential to determining efficacy of self-help treatment in various modules and settings, qualitative research can provide valuable information on service delivery such as availability, acceptability, efficiency and equity of service, and factors that might predict treatment outcome. Banasiak et al. (2007) examined the perception of 36 women who participated in GSH treatment for BN delivered by GPs in primary care. Given self-help studies have shown attrition rates with a median of one third of participants, Banasiak studied participants' beliefs about the most and least effective aspects of GSH delivered in primary care to identify potential areas for improvement (Bansiak et al., 2005). The Evaluation of Treatment questionnaire contained three open-ended questions on the effectiveness of the approach and areas for improvement. The most frequent positive commentary concerned improvements in eating behaviours and body image attitude. The manual was consistently commended for its empathetic style while being clear, logical, and informative. However, some patients believed the meal planning information could have been improved as the term "normal meal" without defining attributes was a difficult concept for participants. The role of the GP was considered crucial, receiving a high volume of positive commentary. Specific GP interventions were believed to promote compliance and enhance motivation. This highlighted the importance of careful monitoring of the food diary, provision of feedback, clarification, reassurance and discussion. The self-help program was thought to be lacking in strategies to address poor body image at the core of BN psychopathology. Both established (Fairburn et al, 1993) and extended (Fairburn, Cooper & Shafran, 2003, as cited in Banasiak, 2007) CBT models point to dysfunctional

over-concern with body weight and shape as the driving force behind the binge/purge cycle. In this manual, the treatment of body image was rudimentary and patients suggested adding steps to improve self-esteem, manage emotions and decrease stress, to better provide cognitive restructuring of beliefs and attitudes.

Pure Self-Help Compared to CBT in Specialist Settings

Treasure et al. (1994) devised a problem-oriented self-help manual for the treatment of BN to be used by sufferers without the aid of a therapist or GP. The manual was written for easy comprehension and was educational in purpose with skills training on self-monitoring, goal setting, assertiveness, cognitive restructuring, and problem solving. A study using this manual (Schmidt et al., 1993), found significant reductions in bulimic symptoms and improved knowledge base on the origins of the condition and factors that perpetuate it. The researchers compared three conditions in a tertiary referral centre: 1) pure self help manual, 2) CBT led by a therapist and 3) waiting list. Patients in the self help group were given a manual with instructions to complete the exercises contained within and told their progress would be reviewed in eight weeks. Patients assigned to the CBT group were allocated to a therapist and completed 16 sessions. The waiting list group received no therapy or manual. All patients were re-assessed after eight weeks.

Patients using the self-help manual and the CBT showed significant and comparable improvement in symptom reduction. The waiting list group was unchanged. Although both the manual and CBT reduced the frequency of binge eating and overall assessed severity, CBT reduced the frequency of vomiting, abnormal dietary pattern and

degree of dietary restraint. As hypothesized, the treatment handbook did reduce bulimic symptoms, although CBT appeared more effective. The data were limited to short-term effects and follow-up and relapse rates were not evaluated.

The manual method might have been more effective as a first-step in the treatment of less severely ill bulimic patients in primary care settings. An eight week manual may have been too long in duration to motivate a group inclined to resist treatment. Some patients reported feeling overwhelmed by the volume of information and advice at one time and felt they didn't know where to start. Others began some exercises, however stopped. It was suggested that efficacy might have been improved if motivation was more sustained through dividing the manual into individual chapters and delivered weekly or by taking a guided approach and interspersing the manual with a few individual sessions. It was concluded that a self-help manual may be most useful as a first phase of treatment or alongside existing treatments.

In another randomized controlled trial, Carter et al. (2003) evaluated the effectiveness of pure self-help (PSH) as a first step for treatment. This study involved 85 women (mean age 27, majority purging sub-type, predominately single, Caucasian) on a wait list for a hospital-based clinic. The subjects were randomly assigned to receive one of two self-help manuals or to a waiting list control condition for eight weeks. One of the manual groups was given self-help materials titled *Overcoming Binge Eating* and the other received *Self-Assertion for Women*. The latter focuses on developing assertiveness skills and did not address specific symptoms of BN. The self-assertion group was used to control for non-specific factors such as an expectation to improve and hearing plausible

rationalization. Self-assertion was chosen because it might have been regarded by patients as a credible alternative treatment given many eating disorder patients report interpersonal issues including suppressed self assertion.

The self-help groups had equivalent effects and were significantly more improved than the control group with no intervention. Similar to the findings of Treasure et al., (1994), the behaviour reductions were related to the primary symptoms of binge eating and purging but did not accompany changes in other features such as dietary restraint, overt concern about shape and weight, or improvements in psychopathology such as depression or self-esteem. The researchers concluded that the observed changes in both self-help groups could be due to non-specific factors such as an expectation ~~to~~ improve or experiencing a greater sense of hope. The CBT manual may have influenced specific symptoms of BN directly, whereas the non-specific manual may have a more indirect effect in changing interpersonal skills. It was determined that PSH might be best suited to those with intimacy problems while patients with better personal skills may benefit from human contact to support behavioural changes.

Technology Aided Self-Help for Bulimia Nervosa

Palmer et al. (2002) demonstrated substantial evidence for the effectiveness of self-help with additional face-to-face guidance. The randomised controlled trial compared three forms of self help over four months with a waiting list comparison group. They compared 1) self-help with minimal guidance, 2) self-help with face-to-face guidance, and 3) self-help with telephone guidance. Minimal guidance in this study was comprised of a brief introduction and follow up appointment four months later. The

face-to-face and telephone guidance were delivered through four out-patient guidance sessions spread over four months. On an intention to treat analysis, only face-to-face guidance was significantly better than other interventions, however, telephone guidance did show promise. In cases where face-to-face contact is hampered by availability of therapists, geographic distance or patient reluctance, telephone support was shown to be a viable option.

Researchers from the United Kingdom (Carril et al., 2003) conducted a study to evaluate the accessibility and efficacy of a CD-ROM based cognitive-behavourial self-help treatment without any added therapist input. Forty-seven patients were recruited from a series of referrals to eating disorder units. Patients were offered the option of therapist-aided treatment as usual after the CD-Rom program and a consolidation follow-up period of two months.

The program consisted of eight interactive computerized modules, combining cognitive-behavioural, motivational, and educational strategies, based on a cognitive-behavioural model developed by Fairburn, Marcus & Wilson (1993). The treatment emphasized motivational strategies similar to those used by Schmidt and Treasure (1993). Patients worked through the modules in order and each module required 45 minutes at the computer. In this instance, patients accessed the CD-Rom in the eating disorder unit but were not assisted by clinicians. The main outcome measure was the Short Evaluation of Eating Disorders Symptoms (SEEDS), a patient self-rating instrument. Eating disorder symptoms were assessed at pre-treatment, after sessions three and eight, and at follow-up two months after treatment. Outcome data were obtained for

39 of 45 patients. At follow-up, there was a significant reduction in the mean number of bingeing, vomiting, and purging episodes (Carril et al., 2003). Considered along with positive results from a computerized psychoeducation package for anorexia nervosa (Andrewes et al., 1996) and internet-based interventions for students at risk from eating disorders (Winzelberg et al., 1999-2000 & Zabinski et al., 2001), the Carril study validates further investigation of computerized self-help programs to improve accessibility of treatment and potentially reduce the amount of time spent in therapist-aided care.

Comparisons can also be drawn with positive results for computer-assisted cognitive therapy for other disorders such as depression (Wright et al., 2005; Selmi et al., 1990). For example, Wright (2005) compared the efficacy of computer-assisted cognitive therapy with standard CBT and a control group without treatment for outpatients with non-psychotic major depressive disorder. Medication-free participants (n=45) were randomly assigned to the three groups. Both computer-assisted CBT and CBT alone were superior to the control group and did not differ from each other on outcome variables. The researchers found the computer module with reduced therapist contact to be as efficacious.

Several studies evaluating the efficacy of self-help interventions for BN had some common limitations. These included limitations in sample sizes, a short follow-up period, self-reported measures of symptoms for evaluation, and either a lack of a comparison group, or use of a waiting list or delayed treatment group, where changes could be due to non-specific factors such as an expectation to improve or experiencing a

greater sense of hope. In some cases, (Treasure et al.1994, Carril et al 1993, Banasiak et al, 2007), behaviour reductions were related to the primary symptoms of binge eating and purging but did not accompany changes in other core features on BN such as dietary restraint, overt concern about shape and weight, or improvements in psychopathology such as depression or self-esteem. Despite the limitations, the literature points to the efficacy of GSH as a positive primary care intervention or first-step treatment. For some patients, it could be the only intervention needed and for others it may augment therapy or bridge the gap to therapists for those on waiting lists.

Taken as a whole, the literature presents a case that self-help is a feasible option for individuals with clinically significant binge eating or BN. Further, the development of a guided self-help tool as a less intensive form of treatment has positive economic implications. CBT as a specialist treatment is not widely available, and second, a full course of CBT is time consuming, typically involving approximately 16-20 therapy sessions delivered over 4-6 months (Bailer, 2004 & Agras & Apple, 1997). Increasing numbers of self-reported cases and referrals places a strain on the clinical services and presents difficulties for mode of delivery in rural and remote regions.

The results of this literature review point to opportunities to expand treatment options. As demonstrated, technology offers a viable method of delivering psychological self-help interventions. While GSH is not a replacement for specialist care in more severe cases, self-help modules, particularly those that are computer aided, offer numerous advantages including geographic and time accessibility, low cost for both

patient and the government, and the potential for interactive and tailored care while alleviating self-imposed stigmatisms.

Conceptual Framework for Proposed Guided Self-Help Program

Eating disorders are complex emotional and physical illnesses that require a variety of therapeutic approaches which can present challenges for primary care providers in identifying and supporting individuals with an eating disorder. A multidisciplinary and tiered model that includes more involvement of primary care teams at the base tiers could increase the number of people screened and treated, particularly with initiatives such as Ontario's Family Health Teams, to support a new model of care. A stepped-care approach may be applied, in which the initial intervention is determined by the patient's needs and available treatment resources.

The issues regarding the role of primary care in the identification, assessment, support and treatment of people with eating disorders are significant, but improvements in service delivery particularly for older patients and for those in rural settings cannot be achieved without involving primary care teams. Evidence clearly demonstrates the value of early identification and intervention before an eating disorder can develop into a life-threatening condition (Berkman et al., 2007) and primary care teams have a critical part to play. Before outlining a tiered approach to the treatment of BN where primary care and guided self-help can play a more prominent role at the base level, it is important to review some underlying principles to this approach. The following is modeled on the example of the Eating Disorder Framework for Wales (Boyle, 2008).

Summary of Underlying Principles for Conceptual Framework

a. Eating disorders are complicated conditions and may be long-term mental disorders that require appropriate responses from health care planners and providers.
b. Effective services are reliant as much on community, primary care, local mental health services as they are on highly specialized services or facilities.
c. Public and media attention are often focussed on people who require tertiary inpatient care, but many cases could be handled by local services with access to specialist advice and support.
d. A four-tier strategic model provides an effective framework for all age groups and is flexible enough to design services for local services through to the most specialized of services.
e. A four-tier approach would focus more attention on the development of a continuum of services across ages and severity. The intention is to enable patients to receive the level and intensity of care that each requires, without mandating patients and staff to wait for and rely on highly specialized services. This could potentially:
    - Increase access to early intervention,
    - Reduce time spent in inpatient care,
    - Reduce likelihood of relapse,
    - Improve cost efficiency and service provision.
f. For staff in community, primary, and secondary care to feel confident in assessment and treatment roles, they need to have support of other tiers.

g. Improvements can only be achieved if there is acknowledgement that there are significant barriers to patients needing access to local services, and that coordination, and actively involved patients and care-givers are required.

It is necessary to reaffirm that BN is a complex mental disorder with severe forms involving potentially life-threatening complications, therefore the proposed framework, reinforces the role of primary care and guided self help for intervention and monitoring BN patients but this could not operate adequately without defined Tier 3 and 4 specialized resources accessible.

Tiered Approach to Care

In the model proposed, guided self-help in primary care plays a role is a four-tiered strategic approach for the basis of planning a comprehensive range of assessment and treatment for people with an eating disorder, and specifically in terms of BN. It is important to note that neither services nor people fall neatly into tiered categories. Patients may require functions of more than one tier at the same time or in succession. Also, health professionals may straddle tiers as well. The following four tables set out an overview of the four tiers and are modified from a conceptual framework proposed by Peter Boyle (2008) in a consultation draft for the treatment of eating disorders in Wales.

Table 2: Tier 1 - Characteristics and Implementation Issues

Tier 1 services are staffed by professionals who are not mental health specialists but who routinely come into contact with people who have an eating disorder.			
Patients most likely to need service.	**Probable interventions**	**Examples of agency or team**	**Key resources required to undertake role**
• People with or without a diagnosed eating disorder who present with or display patterns of concern/risk • Patients with low intensity and chronic eating disorders that need to be monitored	• Education • Screening • Initial identification & assessment • Referral for advice or assessment • Health promotion • Brief interventions • **Guided self-help** • Short term counselling • Long-term monitoring, independently or as part of shared care with specialist services	• General Practitioners and other staff of a Family Health Team • School / University health staff • Community and voluntary sector services • Health care professionals working in general hospital and rural community settings.	• Screening/Assessment skills & tools • Guided self-help tools • Awareness of 'motivational' aspects of eating disorders and consequences for engaging/avoiding help • Guidance on medical risk implications & appropriate investigations
Key implementation issues & barriers • Studies have clearly shown that many General Practitioners are not secure about taking an active role in assessing and monitoring the basic physical health of eating disordered patients, which can result in their condition developing adversely without detection or intervention. • Staff will encounter patients with a very broad range of severity and risk, and sufferers will often mask their disorder as they often fear the likely treatment options more than the disorder itself. • Early identification and sensitive early support are needed to reduce the tendency for patients to have to developed severe symptoms before receiving care.			

Table 3: Tier 2 - Characteristics and Implementation Issues

Tier 2 services are those whose enhanced assessment and intervention skills are essential for addressing eating disorders, but which are not specific or exclusive to those disorders. There are two main groups of activity:

- **Specialists in mental health services, but not necessarily specialists in eating disorders. Staff will have enhanced assessment and intervention skills across full range of mental health problems. They may be part of local mental health provision, or be members of Tier 1 services who have obtained additional expertise in mental health generally and/or with people who have eating disorder.**
- **Additionally, paediatric and adult physicians responding to acute medical risks are defined as Tier 2 services for the purpose of this Framework in the light of their enhanced assessment and treatment skills.**

Patients most likely to need service.	Probable interventions	Examples of agency or team	Key resources required to undertake role
• Patients whose behaviour / condition indicate the possibility of an eating disorder of sufficient severity to require assessment and/or ongoing intervention • This may include inpatients in psychiatric wards where staff have concerns over their physical health, as well as liaison psychiatry input to general medicine/paediatric wards	• General mental health assessment • Interventions & therapy • Relapse prevention & monitoring • Managing transition between teams & tiers • Consultancy to T1, including pre-referral advice • Comprehensive investigation & monitoring of physical health together with GP etc	• Specialist Child & adolescent mental health service teams • Community Mental Health Teams • Staff in Tier 1 services with enhanced expertise, e.g. Primary Mental Health Care Workers • Paediatric and general medical teams.	• Suite of assessment tools • Guidance on medical risk implications & appropriate investigations • Sufficient range of disciplines, expertise and experience • Access to specialists for training, advice and support

Key implementation issues & barriers

- Eating disorders have both physical and psychiatric/psychological dimensions and consequences which can be of serious clinical risk.
- The physical effects of severe eating disorders can have grave consequences if they are not recognized, understood or addressed by medical and nursing staff on psychiatric, general medical or paediatric wards.
- Eating disordered cannot be separated from other psychiatric disorders. Many patients will suffer from more than one disorder, and some aspects of eating disorders will have major effects on the presentation and treatment efficacy of other disorders.
- The highest risk of developing serious eating disorders is between the ages of 15 to 24, yet care-givers, sufferers and practitioners report continued and extensive problems with gaps in Adult coverage. Failure to act at the critical transitional stage can have life-long consequences.

Table 4: Tier 3 - Characteristics and Implementation Issues

Tier 3 services are specialised services that focus on people who have serious and enduring mental disorders that require particular expertise through formal membership (possibly part-time) of designated multi-disciplinary teams.

Access to Tier 3 services is likely to be restricted to referrals from Tier 2 services, but there should also be provision for GP or Paediatric / Physician referrals.

Patients most likely to need service.	• **Probable interventions**	• **Examples of agency or team**	• **Key resources required to undertake role**
• Patients who have not responded to Tier 1 or 2 interventions or who are seen to require the expertise of Tier 3 • Patients with particularly complex needs and/or co-morbidity • Some patients returning from inpatient treatment	• Structured interventions and therapy. • Intensive home-based day-care or family interventions. • Structured relapse prevention. Intensive community-based outreach & day care therapy programmes. • Consultancy to T2	• Tertiary/Regional Eating Disorders Teams	• Multidisciplinary team spanning appropriate range of skills • Access to clinical supervision • Resources to enable them to undertake assessments and interventions in wide range of settings and locations for outreach activity, including meal support • Strong pathways to/from to acute medical services

Key implementation issues & barriers

- Coverage of eating disorder teams can be very limited, and those in place do not appropriately address full range of ages or diagnoses.
- The existence of eating disorder teams must be seen as an essential element in a comprehensive service. These will greatly reduce the need for inpatient care, but there will always be cases when individuals may require planned or emergency admissions so arrangements need to be in place for this.

Table 5: Tier 4 - Characteristics and Implementation Issues			
Highly specialized services involving intensive treatment regimes. Access will be restricted to referrals from Tier 3 services.			
Patients most likely to need service.	• **Probable interventions**	• **Examples of agency or team**	• **Key resources required to undertake role**
• Patients who have not responded to interventions through T1-3 or who are seen to require the expertise of Tier 4, • or whose physical condition makes inpatient care essential • Patients who are identified as high risk and for whom a short period of intensive assessment is required to facilitate treatment by Tiers 2/3	• Inpatient treatment for life-threatening cases • Inpatient treatment for highly complex cases, which have not been resolved following community interventions • Highly complex assessment where there is significant comorbidity.	• In patient care teams	• Defined range of professional expertise and interventions appropriate to designation as Tier4 • Access to appropriate settings to provide community based intensive interventions • Pre-arranged pathways to relevant facilities and expertise to ensure smooth stepped transitions

Program Proposal

Many patients with a clinically significant eating disorder experience difficulty accessing specialist psychological treatments, may have an aversion to the setting, and some may not have meaningful alternatives to a prolonged wait list. As demonstrated in the literature review and by shown in the conceptual framework, guided self-help can play a role in BN treatment and in some instances may be as effective as formal psychological therapies from a qualified therapist, and can bridge the waiting gap. Where a patient can gain from CBT, this can be provided by a range of staff at the primary care tier with the appropriate training and supervision.

Guided Self-Help Tool: Description and Structure

While a guided self-help program for patients with BN is not a replacement for direct patient care in more severe cases, the model can offer numerous advantages in terms of service accessibility and also in flexibility to deliver age-appropriate content. Developed in consultation with experts from an eating disorder treatment centre, the tool would consist of a series of modules. Content would be determined with the project partners based on the following sequential elements:

1) Overview including the physical, emotional and social consequences of the disorder
2) Development of the disorder and societal influences
3) Self-monitoring of food eaten and thoughts and feelings during bingeing and purging
4) Increasing motivation to change
5) Strategies to fight cravings and improve healthy eating

6) Role of thoughts in bingeing

7) Problem solving

8) Confidence building

9) Planning for the future

After a baseline assessment performed at the time of diagnosis, the patients would be introduced to the program by their primary care physician, nurse practitioner, or, in the case of rural health care, community nurses and other health professionals trained to use the tool. Patients would work through the modules in order and only proceed to the next once the previous model is completed to force a sequential flow. Each module would require 45 minutes to an hour to complete online, augmented by patient workbooks with assignments.

The imagery, language and case studies in the proposed tool would also be relevant to women of an older demographic and address family/peer support laterally, as opposed to parental information on handling adolescents with BN. By example, eating disorder health promotion web-sites are often aimed at young women and can contain statements similar to, *"The typical bulimic is a female, in her late teens or early twenties. Bulimics tend to be introverted, achievement-oriented and do well in school* (Lambton Community Health Services, 2006)," thus the option for age appropriate imagery and content would be necessary to better reflect the continuum of ages this disorder can affect. It is proposed that the intervention be hosted on a secure Internet-site with a written companion manual to ensure accessibility for those without Internet access.

Patient Eligibility

The proposed guided self-help tool would be used in cases where core symptoms of BN were determined from slightly modified DSM-IV criteria for BN: 1) DSM-IV defines an episode of binge eating as the consumption of an amount of food that is "definitely larger" than normal accompanied by a sense of loss of control over eating. Patients who describe consumption of moderate food during binges would be eligible. 2) DSM-IV requires that binge eating and inappropriate compensatory behaviours, such as self-induced vomiting occur on average at least twice a week for 3 months. Patients who present with a frequency of once a week for 3 months would be eligible. Patients would also be required to meet the remaining DSM-IV criteria, which include preoccupation with shape and weight. Exclusion factors for primary care delivery would include: body mass index below 18, a diagnosis of Anorexia Nervosa, pregnancy, substantial medical illness, reported alcohol or substance abuse, and other serious psychiatric diagnosis requiring immediate treatment.

Assessment and Progress Monitoring

At the baseline visit, patients would be assessed with an abbreviated structured clinical interview for DSM-IV, an abbreviated version of the Eating Disorder Examination interview, and the following self-report measures: Eating Disorder Examination questionnaire, and the Beck Depression Inventory. After diagnosis, patients would meet with a nurse who would provide education on the self-help tool and instruct patients to begin module one. In addition to monthly physician visits for periodic assessments for medical complications, weight and nutrition status, a weekly series of guided self-help

visits would be scheduled with a nurse for the four weeks following and then tapered off to once a month. If required, patients of a family health team could also see a dietician and or social worker for these subsequent visits. To monitor progress, the Eating Disorder Examination questionnaire would be administered after modules 5 and module 9 of the program are completed.

It would be imperative that a clear threshold is defined to determine at what point a patient should be directed to more specialist services as outlined in the tiered conceptual model. The following table (Pritts and Susman, 2003), adapted from Practice Guideline for the Treatment of Patients with Eating Disorders, American Psychiatric Association Work Group on Eating Disorders, 2000, provides a sound model to escalate specialist care:

TABLE 6

Level-of-Care Criteria for Patients with Eating Disorders

Characteristic	*Level 1: Outpatient*	*Level 2: Intensive outpatient*	*Level 3: Full-day outpatient*	*Level 4: Residential treatment center*	*Level 5: Inpatient hospitalization*
Medical complications	Medically stable to the extent that more extensive monitoring, as defined in Levels 4 and 5, is not required			Medically stable (not requiring NG feeds, IV fluids, or multiple daily laboratories)	Adults: HR < 40 beats per minute; BP < 90/60 mm Hg; glucose < 60 mg per dL (3.3 mmol per L); K^+ <3 mg per dL (0.8 mmol per L); temperature <36.1ºC (97°F); dehydration; renal, hepatic, or cardiovascular compromise Children and adolescents:HR <50 beats per minute; orthostatic BP; BP <80/50 mm Hg; hypokalemia;

					hypophosphatemia
Suicidality	No intent or plan			Possible plan but no intent	Intent and plan
Weight, as percent of healthy body weight	> 85 percent	> 80 percent	> 70 percent	< 85 percent	Adults: < 75 percent Children and adolescents: acute weight decline with food refusal
Motivation to recover (cooperativeness, insight, ability to control obsessive thoughts)	Good to fair	Fair	Partial; preoccupied with ego-syntonic thoughts more than 3 hours per day; cooperative	Fair to poor; preoccupied with ego-syntonic thoughts 4 to 6 hours perday; cooperative with highly structured treatment	Poor to very poor; preoccupied with ego-syntonic thoughts; uncooperative with treatment or cooperative only with highly structured environment
Comorbid disorders (substance abuse, depression, anxiety)	Presence of comorbid condition may influence choice of level of care				Any existing psychiatric disorder that would require hospitalization
Structure needed for eating/gaining weight	Self-sufficient		Needs some structure to gain weight	Needs supervision at all meals or will restrict eating	Needs supervision during and after all meals, or NG/special feeding
Impairment and ability to care for self; ability to control exercise	Able to exercise for fitness; able to control obsessive exercise		Structure required to prevent excessive exercise	Complete role impairment, cannot eat and gain weight by self; structure required to prevent patient from compulsive exercising	
Purging behavior (laxatives and diuretics)	Can greatly reduce purging in nonstructured settings; no significant medical complications, such as ECG abnormalities or others suggesting the need for hospitalization			Can ask for and use support or skills if desires to purge	Needs supervision during and after all meals and in bathrooms
Environmental stress	Others able to provide adequate emotional and practical support and structure		Others able to provide at least limited support and structure	Severe family conflict, problems, or absence so as unable to provide structured treatment in home, or lives alone without adequate support system	
Treatment availability/living situation	Lives near treatment setting			Too distant to live at home	

NG = nasogastric; IV = intravenous; HR = heart rate; BP = blood pressure; K^+ = potassium level; ECG = electrocardiogram.

Resources and Partnerships

To ensure the validity of content delivered through this tool, a partnership with a specialist eating disorder program under the auspices of mental health services would be imperative. In addition to content development, the partnership would facilitate physician education, and project management for promotion and implementation with primary care providers.

Staff resources would include a staff coordinator for outreach to primary care professionals to adopt the tool and technical support to develop and maintain the online tool. To provide qualitative and quantitative analysis of the program, the program coordinator would also work with researchers to conduct a study on test sites in primary care over a one-year period. Outcome measures would include the number of BN patients in primary care, results from the Eating Disorder Examination questionnaire, relapse rates, number of patients referred to specialist care after GSH treatment and a review of qualitative feedback from both patients and primary care providers.

Program Planning and Implementation Logic Model (next page)

Table 7: Logic Model - Development of a computerized guided self-help tool for patients with bulimia nervosa in primary care				
Resources	**Activities**	**Outputs**	**Short and Long Term Outcomes**	**Impact**
➢ Partnership with Eating Disorder Program to develop guided self help content ➢ Program coordination to oversee project management and education/outreach to primary care providers ➢ Group of patients willing to test and pilot the self-help tool both through quantitative study and qualitative feedback on the tool ➢ Technical experts to develop the web tool.	➢ Development and marketing of physician education and patient recruitment program ➢ Development of guided computerized self-help tool and written manual ➢ Education delivered to primary care teams on administering the tool in their practice	➢ Delivery of the tool to patients in the study group, # of patients in study group and in practice ➢ Training to allied agencies and primary care providers within local area and the district, # of primary teams utilizing tool ➢ Research results on the uptake of the tool and outcome	➢ Increased care options and continuity of care for persons with BN, particularly mature patients ➢ Reduction in the number of patients with bulimia not able to access therapists; more assistance during waiting time to specialist treatment ➢ Better understanding of the role of self-help in BN therapy ➢ More information collected on the needs of mature BN patients	➢ Improved health status for individuals; changed behaviours and level of functioning ➢ Improved family and social relations for the patients ➢ Community level impact of healthier citizens

Conclusion

People with this eating disorder often feel depressed, ashamed, and guilty after a binge. Many bulimics know that their behaviour is abnormal and that their eating binges are not merely ordinary overeating. They also know that anxiety and depression sometimes trigger their episodes. However, they are usually unable to break the binge and purge cycle without professional help. Primary care teams have an appropriate role to play in early detection and establishment of seriousness in a patient's condition, undertaking assessment and providing regular medical monitoring, treating uncomplicated cases in primary care, referring complex cases to specialist out or in-patient treatment, acting as a health educator for the patient and family, prevention and health promotion, and management of chronic patients.

Often eating disorder patients may deny their illness and resist treatment; however, many willingly seek help and are anxious to try to change their behaviour. As demonstrated in this proposal, guided self-help and technology aids offer a viable method of delivering psychological interventions. This pilot program will further test the applicability to improving body image and disordered eating. In addition to furthering knowledge on the topic, this partnership of mental health professionals and media developers expands treatment options for individuals and their supporters living with the disorder.

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