

Frames of reference utilized in the rehabilitation of individuals with eating disorders

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ABSTRACT

An occupational therapist's role with clients diagnosed with eating disorders, both anorexia nervosa and bulimia nervosa, has been described throughout the literature. However, the frames of reference and treatment approaches that occupational therapists implement have not been clearly established or validated. This paper outlines the symptomatology of anorexia nervosa and bulimia nervosa, and critically reviews the current literature concerning the frames of reference and treatment approaches used by occupational therapists when intervening with this population. The literature reviewed indicates that therapists are using a variety of frames of reference and treatment approaches. There appears to be an emphasis on the psychoanalytical and cognitive-behavioural frames of reference, although there is a lack of empirical evidence in regards to all frames of reference and treatment approaches. Reasons for the lack of current research with this population, and possible future areas of research are suggested.

RÉSUMÉ

Le rôle de l'ergothérapeute auprès des clients ayant reçu le diagnostic d'anorexie mentale et de boulimie mentale a été décrit dans la littérature. Cependant, les cadres de référence et les approches mis en oeuvre par les ergothérapeutes n'ont pas été clairement établis ou validés. Cet article expose la symptomatologie de l'anorexie mentale et de la boulimie mentale et fait une analyse critique de la littérature actuelle sur les cadres de références et les approches utilisés par les ergothérapeutes qui interviennent auprès de cette population. La littérature examinée indique que les thérapeutes utilisent divers cadres de références et approches. L'accent semble être mis sur les cadres de référence psychanalytiques et cognitifs-behavioraux, bien que les preuves empiriques ne soient pas suffisantes pour tous les cadres de référence et les traitements. Les auteurs présentent les raisons pour lesquelles peu de recherches sont effectuées présentement auprès de cette population et suggèrent des avenues possibles pour la recherche.

Occupational therapists' unique contribution toward the treatment of individuals with eating disorders (ED), is their combined knowledge of physical, interpersonal and psychological functioning (Barris, 1986; Giles & Chng, 1984; Lim & Agnew, 1994). The most effective treatment of ED is client specific and delivered using a multidisciplinary team (Beck, 1993; Breden, 1992). The team should include representatives from occupational therapy, psychiatry, medicine, psychology, nursing, nutrition, social work, and recreational, art and movement therapies (Giles & Allen, 1986; Harries, 1992; Lim & Agnew, 1994). Individuals with ED encounter problems in self-care, productivity, and leisure, such as poor nutrition, excessively high expectations of self, decreased interest in vocational and social pursuits, poor social skills, excessive exercise, and lack of meaningful and purposeful activity (Barris, 1986; Beck, 1993). Therefore, the goal of occupational therapy intervention with this population is to maximize the clients' function in social, psychological and physical domains, and to assist them in engaging in meaningful, satisfactory occupations (Barris, 1986; Giles & Allen, 1986).

The role of occupational therapy among persons with ED, has only recently been described throughout the literature, possibly due in part to that fact that prior to the 1970's, these clients were placed on general psychiatric wards (Giles & Allen, 1986). The milieu on the general psychiatric wards was not conducive to developing specialized interventions (Giles & Allen, 1986). The milieu on the general psychiatric wards was not conducive to developing specialized interventions (Giles & Allen, 1986). In the past 20 years, formal eating disorder units have been established. Due to the lack of occupational therapy research investigating the most effective frames of reference and treatment approaches, it would appear that occupational therapists are currently basing their multi-modal interventions on generalizations of others research (Giles & Allen, 1986; Lim & Agnew, 1994). A suitable frame of reference must be chosen during occupational therapy programme planning in order to "...make intervention relevant to the problems and needs identified in the assessment" (Canadian Association of Occupational Therapists (CAOT), 1991, p. 37) and to "...provide guidelines for evaluation and intervention..." (Mosey, 1989, p. 196). The current interventions used by occupational therapists, even if based on others' research, should continue to be assessed for their effectiveness within occupational therapy, either through case studies or other research methods.

In order to acquire an accurate knowledge base from which to conduct further studies on the application of frames of reference, and treatment approaches, it is important to critically review the current research in this area. This descriptive paper will outline the symptomatology of ED, and define, explore, and present current research supporting the following frames of reference, and subsequent treatment techniques, currently being used by occupational therapists, working with individuals with ED: psychoanalytical, behavioural, develop-

mental, familial, cognitive-behavioural. Reasons for the lack of research, and possible areas for future studies will be discussed.

According to the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual*, fourth edition (*DSM-IV*) (1994), ED consist of two specific diagnoses, Anorexia Nervosa (AN) and Bulimia Nervosa. AN is an illness which combines social, biological, and psychological factors, whereby the symptoms of the mental illness are exhibited through bodily behaviours (Giles & Chng, 1984; McColl, Friedland, & Kerr, 1986). According to *DSM-IV* (1994), there are four criteria to AN, which are as follows:

1. "...refusal to maintain a minimally normal body weight" for one's height and age (p. 539)
2. extreme fear of becoming fat
3. distorted body image, self-evaluation dependent upon body image, or denial of the grave nature of being underweight
4. lack of menstruation in post-menarcheal females, for three consecutive cycles.

Weight loss occurs because of excessive exercise, a self-limiting diet, or purging, which occurs in 30%-50% of individuals with AN (*DSM-IV*, 1994; Martin, 1989). Purging consists of ridding oneself of ingested food, through behaviours such as "...self-induced vomiting, use of laxatives or diuretics, strict dieting or fasting..." (Beck, 1993, p. 584).

The personality characteristics of individuals with ED include low self-esteem, decreased insight regarding their illness, and perfectionistic or obsessive-compulsive tendencies (Beck, 1993; *DSM-IV*, 1994; Giles & Chng, 1984). Bruch (1973) postulates that individuals with AN seek control and independence, but end up misguiding this desire into an obsessive control over one's own weight. In addition to these symptoms, there are a set of physical aspects which include: constipation, pain in the abdomen, intolerance to cold temperatures, excessive energy, or feelings of lethargy. The prevalence of this disorder, in industrialized societies, is between 0.5%-1.0%, following chronic or episodic courses, with over 90% of the individuals being female (*DSM-IV*, 1994). ED occurs predominantly in societies which are industrialized, and whose media contains multiple messages of thinness equalling attractiveness (*DSM-IV*, 1994).

Bulimia Nervosa (BN) was first identified as a separate syndrome by *DSM III*, in 1980 (Martin, 1989). The five criteria to BN are as follows:

1. episodes of recurrent binge-eating
2. behaviours to compensate for binge-eating, such as vomiting, diuretics, overabundance of exercise, abuse of laxatives, and enemas or fasting
3. the above criteria occurring, on average, twice weekly, for a three month period
4. self-evaluation heavily dependent upon body's shape and weight

5. all of the above not occurring solely during episodes of AN (DSM-IV, 1994).

Individuals with BN may have difficulty communicating their feelings, and may deal with their psychological stress by bingeing (Martin, 1989, 1991). Often these individuals are lonely, narcissistic, intelligent, attractive, tend to have low self-esteem, and are ashamed of their behaviours (DSM-IV, 1994; Martin, 1989, 1991). Along with these personality characteristics, there are a constellation of physical features associated with BN which include destruction of dental enamel, and occasional menstrual irregularity. For the majority of individuals, weight is within normal limits for their age and height (DSM-IV, 1994). Prevalence of BN in the general population is 1%-3%, with over 90% of individuals being women (DSM-IV, 1994). Age of onset is usually late adolescence or early adulthood, with the course being episodic or chronic (DSM-IV, 1994).

As with AN, BN is most often recognized in industrialized countries. Other similarities between individuals with AN and BN may include: perfectionistic qualities; engagement solely in tasks where one feels a sense of control over the outcome; and feelings of deprivation, rejection, anxiety, and anger (Bailey, 1986; Beck, 1993). Speculations of the cause of both illnesses have pointed to inherent personality characteristics of the individual, such as low self-esteem, and being easily persuaded by societal pressures (Harries, 1992). Other possible explanations of the cause of ED include conflicting media messages, and a belief held by western society that an individual must be thin in order to be attractive (Breden, 1992; Harries, 1992). In contrast to AN, individuals with BN tend to be older, approximately 16-40 years of age, and may engage in other impulsive behaviours such as stealing and promiscuity (Martin, 1989, 1991).

Individuals with ED encounter many difficulties in functional performance such as limited communication skills, inadequate time management skills, and a lack of assertiveness skills (Beck, 1993; Bridgett, 1993; DSM-IV, 1994). In order to develop these skills and promote functional behaviour, occupational therapists utilize therapeutic activities (CAOT, 1991). To engage a client in "relevant, meaningful, and purposeful activity" (p.51), occupational therapists must choose an appropriate frame of reference (Rockwell, 1990). A frame of reference is a "link between theory and practice" serving as a guide that "delineates the types of interactions considered to eliminate or minimize dysfunction" (Mosey, 1986, p. 5). Accordingly, intervention will be defined as "...the process of interceding to affect functional change...by the use of purposeful activity" (CAOT, 1991, p. 51). Furthermore, approaches will be defined as those interventions which are congruent with the principles of the chosen frame reference (CAOT, 1991).

Rockwell (1990), found that most eating disorder units treated clients with AN and BN with the same intervention, and thus, throughout this paper, frames of references and treatment approaches used for AN and BN will be discussed in unison.

Regardless of the similarities in functional treatment of AN and BN, there continues to be a debate concerning the frames of references occupational therapists are using to guide their interventions. Generally, there appears to be a consensus that a number of frames of reference should be used in treatment, although there continues to be a debate concerning which combination should be used (Giles & Allen, 1986; Harries, 1992; Martin, 1989). Harries (1992) states that a combination of psychoanalytical, medical and behavioural frames of reference are necessary in the treatment of individuals with ED, whereas Giles and Allen (1986), stated that in addition to the above mentioned frames of reference, treatment planning should include cognitive-behavioural and familial perspectives. Martin (1989) maintained that intervention from the behavioural, and familial frames of references may specifically help individuals with BN. In addition, it is interesting to note that when using the Model of Human Occupation (MOHO) as a frame of reference, which will be expanded upon later in this paper, a number of treatment approaches drawn from many frames of reference can be utilized (Barris, 1986).

There have been two studies conducted to determine the frames of reference and treatment approaches currently being used by occupational therapists in the treatment of individuals with ED. Rockwell (1990) sent out 204 questionnaires to occupational therapists working with individuals who have ED. This descriptive research design consisted of a 15 item questionnaire. The participants were asked to choose the answer that matched most closely with their beliefs, from a set of predetermined responses. Three of these items sought information concerning the frames of reference and treatment approaches being used at their facilities. One question addressed the participant's beliefs in relation to the etiology of ED. The other 11 items pertained to the facility itself. The return rate was 32%, all by mail, although only 21% of the questionnaires could be used for data analysis. A follow up letter, mailed out a few weeks after the initial questionnaire, may have helped to increase the response rate. The data collected was at the ordinal level, and weighted rank orders were calculated.

Results indicated that participants felt the cause of ED are as follows, in descending order: psychological issues, dysfunctional family structure, cognitive distortion, faulty development, social pressure, learned behaviour and physiological disturbance (Rockwell, 1990). Rockwell did not specify whether the occupational therapists were using only one frame of reference, or a number of them in combination. The most frequently used frames of references are, in descending order: psychoanalytical, cognitive, familial, developmental, medical, behavioural (Rockwell, 1990). There was a 89% match between theoretical etiologies and choice of frames of reference, indicating that the occupational therapists theories of disability matched their choice of intervention. Treatment activities and approaches most frequently used are projective media, menu

planning, crafts, stress management training, relaxation therapy and assertiveness training (Rockwell, 1990). Other activities that are employed include: movement therapy, clothes shopping, behavioural strategies, education, vocational training, weight/exercise training, dining out, and nutrition classes (Rockwell, 1990).

A second study was conducted by Lim and Agnew (1994), to determine the current frames of reference and treatment approaches used by occupational therapists. Their descriptive study was based on Rockwell's (1990) research. Lim and Agnew distributed 80 questionnaires to all occupational therapists working in the Eastern States of Australia. Lim and Agnew developed a questionnaire using open and close ended questions seeking information concerning the facility in which the occupational therapists were working, and the current frames of references being utilized. Lim and Agnew's study had a return rate of 26.3%, a low response rate similar to Rockwell. The majority of participants replied by mail, and the other participants were interviewed by a person unidentified in the study. This difference in data collection may have influenced the results, because the individuals who were interviewed had the opportunity to clarify questions they may have had (Lim & Agnew, 1994). Results indicate that the occupational therapists felt the etiology of ED is as follows: psychological issues, cognitive distortions, dysfunctional families, social pressure, learned behaviour, faulty behaviour, and physiological disturbances (Lim & Agnew, 1994). The most frequently used frames of reference include: cognitive-behavioural, Kielhofner's occupational dysfunction (MOHO), psychoanalytical, family therapy, behavioural, medical, and developmental (Lim & Agnew, 1994). The overwhelming majority of participants, 95.2%, stated that they used a combination of frames of reference. Common treatment approaches used were "cooking groups, assertiveness training, group discussions and communication skills groups" (Lim & Agnew, 1994, p. 312). Lim and Agnew discussed the discrepancy between participants theory of disability concerning ED, and their choice of frame of reference. These authors state that it is due to a lack of "commitment to beliefs" on behalf of the participants (Lim & Agnew, 1994, p. 313). This discrepancy could be the result of confusion on part of the participants, concerning the definition of a frame of reference, since Lim and Agnew did not include clear terminology in their study. There was, however, a thorough discussion of possible areas for future research, and other occupational therapy issues surrounding treatment with individuals with ED.

Rockwell (1990), and Lim and Agnew (1994) conducted descriptive research, in the form of questionnaires. Similarities between Lim and Agnew and Rockwell's studies include comparable beliefs concerning the causes of ED, and very low response rates, a factor which limits their abilities to draw statistically significant conclusions (DePoy & Gitlin, 1994). A major difference among these studies is that Lim and Agnew did not

include a definition of a frame of reference, while Rockwell provided her own interpretation. This variation may have contributed to some of the differences found in the results, such as utilization of different frames of reference, and therefore treatment approaches and activities. In addition, because both groups of participants were practising in different areas of the world, critical differences in their environments may have influenced their choice of etiologies, frames of reference and treatment approaches. These limitations make it more difficult to generalize the results to similar populations. Another drawback to both studies was that there were a limited number of questions about the most commonly used frames of reference and treatment approaches. The majority of questions on the questionnaire concerned the facility in which the participants were working. It seems as if the authors were searching for a profile of an ED unit, rather than discovering which frames of reference and treatment approaches were currently being utilized.

Rockwell's (1990) and Lim and Agnew's (1994) exploratory research, although having several methodological limitations, suggested the most commonly used frames of reference were as follows: psychoanalytical, behavioural, developmental, familial, cognitive-behavioural, and Kielhofner's occupational behaviour. These frames of reference, their treatment approaches, and supportive research, will now be defined and further explored.

Supporters of the psychoanalytical frame of reference state that the causes of ED are "manifestations of underlying psychological problems and self doubts" (Lim & Agnew, 1994, p. 310; Rockwell, 1990). A more classical view is put forth by Martin (1985a), who asserts that ED are due to unresolved sexual and hostile conflicts, and that these individuals lack ego strength, which limits their ability to interact with the environment. These individuals have distorted thoughts in regards to their eating habits (Martin, 1985a). Giles and Chng (1984) state that the psychoanalytical frame of reference views ED as "oral ambivalence", and that the self-induced restricted diet is a fearful reaction to prevent "magical impregnation" (p. 139). In theory, occupational therapy treatment using a psychoanalytical frame of reference allows the individuals to describe and communicate feelings, and engage in success experiences to improve self-esteem through the use of creative activity (Breden, 1992).

Interventions using the psychoanalytical framework includes approaches and activities such as projective art, psychodrama, beauty and make-up lessons, dressmaking, relaxation, social skills training, menu planning, cooking, dining at restaurants, and creative movement groups, that allow for self-expression (Bailey, 1986; Giles & Allen, 1986; Giles & Chng, 1985; Martin, 1991). Projective art focuses upon testing new skills, developing insight and self-awareness, improving communication, and to "...utilize insights gained" (Martin, 1985b, p. 459). One of the advantages of using projective art as a

treatment technique is its ability to be easily graded, and used as a third party activity in facilitating discussions (Bailey, 1986; Martin, 1991).

There are few empirical studies validating the use of the psychoanalytical frame of reference in guiding treatment. Giles and Allen (1986), Giles and Chng (1984), and Lim and Agnew (1994) declare that the use of psychotherapy alone has not been proven to be effective, and that this framework will not help the individual to deal with the functional problems he/she will encounter. Harries (1992) expressed the view that a "combination of medical, behavioural, and [psychoanalytical] approaches is necessary in order to both restore weight and to provide effective psychotherapy..." (p. 334). She provides three case studies of individuals with AN, from the Maudsley ED Unit at the Maudsley Hospital, in London, England, as evidence (Harries, 1992). The reported case studies use a psychoanalytical frame of reference to promote an understanding of ED through the use of self-expression, and through enhancement of functional skills of daily living (Harries, 1992). The main modality through which these goals are accomplished is projective art. Harries states she conducted a survey of London eating disorder units, and discovered that the treatment goals and activities utilized at her unit were "widely acknowledged" (p. 335). Harries did not include a reference or any empirical evidence to support the effectiveness of this approach. All three case studies used projective art to determine problem areas and explore feelings related to their illnesses. Outcome measures of these case studies included stabilization of weight, re-engagement in productive roles, and changes on drawings completed by the clients. One of the case studies reflected long term success, whereas, the other two reflected short term improvements, based on subjective interpretations of art completed while in the hospital.

Two case studies were reported by Bailey (1986), at the Sheppard and Enoch Pratt Hospital in Baltimore, Maryland. They used activity-based treatment, working mainly from the psychoanalytical frame of reference in conjunction with the familial frame of reference. The occupational therapists used mainly treatment modalities from the psychodynamic frame of reference, consisting of art therapy and dance therapy. Problems were identified, addressed, and monitored through art and dance therapy. Similarly to Harries' article (1992), the outcome measures used were subjective. Bailey reported successful functional outcomes with both individuals, however, it is difficult to attribute this success to the psychoanalytical framework alone, because the participants were receiving co-intervention from the cognitive-behavioural frame of reference.

There appears to be a lack of empirical evidence concerning the effectiveness of the psychoanalytic frame of reference. The results of the documented case studies, can not be generalized due to their non experimental, exploratory nature (DePoy & Gitlin, 1994). However, case studies do provide descriptive information on a single individual. Outcome mea-

asures included re-engagement in previous or new roles, art, and more conventional outcomes, such as weight gain. The case study was strengthened by including objective and subjective outcome measures. Further research is required in order to validate the use of the psychoanalytical frame of reference.

The behavioural frame of reference views ED as a set of maladaptive learned behaviours that result in anxiety when eating or gaining weight (Martin, 1985a; Rockwell, 1990). This framework only deals with observable behaviours, and therefore, dysfunctional thoughts are not addressed or changed through therapy (Giles, 1985). Occupational therapists working from this frame of reference, shape appropriate behaviour through positive and negative reinforcements and modelling, to promote weight gain (Giles & Chng, 1984; Martin, 1985a; Rockwell, 1990).

Behaviour therapy became a pillar in many eating disorder units (McGee & McGee, 1986), however, Giles (1985) has questioned the ability of behavioural reinforcers to generalize to real life situations outside the hospitals. There is little research concerning the effectiveness of occupational therapy treatment using the behavioural frame of reference. Eating disorder programmes are described by Bridgett (1993), and by McColl et al. (1986). Bridgett (1993), described a programme at Newington Children's Hospital that uses behavioural and functional frames of reference. The interventions described consist of regaining or acquiring self awareness, using activities that focus on body image, time management and stress management skills. It appears that this setting used a cognitive-behavioural frame of reference, rather than a pure behavioural approach as Bridgett states, and therefore, will be described in greater detail under that heading.

McColl et al. (1986) described an eating disorder unit at Toronto General Hospital, which used a behavioural system consisting of different levels of privileges. Progression through the levels is dependent upon weight gain. The authors reported that initially, clients attempt to gain as many privileges as possible throughout treatment. Interestingly, McColl et al., noted that when these women had attained the highest level of privileges, and were engaging in various activities, they did not report a sense of satisfaction. This could be due to an internal characteristic of individuals with ED. No other description of occupational therapy intervention was included by McColl et al. It would have been helpful to incorporate a case study, which detailed specific intervention using the behavioural frame of reference.

There appears to be a lack of empirical evidence, to support the use of the behavioural frame of reference. There was one description of an Eating Disorder Unit that uses a behavioural framework (McColl et al., 1986). The role of the occupational therapist was to design activity-based, client-specific programmes. The treatment approaches or activities, were not further described or validated (McColl et al., 1986).

Subscribers of the developmental frame of reference believe that ED are caused by a lack of consistent and regular responses to the needs of the individual during childhood (Lim & Agnew, 1994; Rockwell, 1990). Rockwell asserts that this developmental problems results in an inability of the child to differentiate between interpersonal and biological feelings (Rockwell, 1990). Treatment using this frame of reference provides an atmosphere for interaction and exploration with the environment to enhance a sense of effectiveness (McCull et al., 1986). This frame of reference appears to be well defined in the literature, but there was no published research of occupational therapy intervention using this framework available to the author at the time of this review.

Supporters of the familial frame of reference emphasize the environment, and view dysfunctional families as the cause of ED (Rockwell, 1990). Families of individuals with ED are reported to emphasize thinness, attractiveness, appearance, and equate these characteristics with self-discipline, self-control, and self-worth (Giles & Allen, 1986; Rockwell, 1990). Treatment is aimed at resolving underlying familial issues and problems, such as over protectiveness, and failure to reach satisfactory resolutions to conflict (Giles, 1985; Lim & Agnew, 1994; Rockwell, 1990). A pilot study conducted by Le Grange, Eisler, Dare, and Russell (1992) indicated that conjoint family therapy and family counseling appear to "...be effective in bringing about significant symptomatic relief" (p. 355) such as weight gain, and improvements in psychological factors. However, the individuals facilitating family therapy in this study were psychologists, psychiatrists and social workers. Although this frame of reference is used often by occupational therapists, as documented by Rockwell (1990), there is no research or descriptions of the types of occupational therapy interventions based on this frame of reference.

Subscribers of the cognitive-behavioural frame of reference believe that dysfunctional values and beliefs, and misconstrued perceptions of reality, in regards to weight and the shape of the individual's body, are the cause of ED (Giles & Allen, 1986; Lim & Agnew, 1994). Treatment from this frame of reference is aimed at examining, challenging, and modifying, the validity of the individual's beliefs (Rockwell, 1990). The client is taught to monitor "automatic thoughts" (Giles, 1985, p. 512) to correct "distorted conceptualizations" (Giles & Allen, 1986, p. 56), take responsibility for their behaviours, and to identify the influence of cognition on their behaviours. Giles and Chng (1984), and Giles and Allen (1986), have argued that frames of reference and treatment approaches focusing solely on either the cognitive or behavioural aspect of an individual will result in ineffective treatment because they fail to recognize the link between behaviour and cognition. Successful treatment from the cognitive-behavioural frame of reference depends upon the client's motivation, and proposes that as client's awareness into their illness rises, they will cease to

engage in dysfunctional behaviours such as bingeing and restricting their diets (Giles, 1985; Giles & Chng, 1984; Martin, 1991).

Giles (1985), and Giles and Allen (1986), argue that this framework is the best fit with occupational therapy due to its focus on functional problem-solving, which helps the client to identify and practice alternative behaviours to problem situations. Giles and Chng (1984), and Giles advocate "an activity-oriented approach to cognitive restructuring" (p. 139), and Martin (1991) advocates a contractual-coping approach, in order to assist the client in attaining a more accurate body image, enhanced self-confidence and change in dysfunctional eating behaviours. In the contractual-coping approach, the contract, developed by the client and the therapist, lays out specific goals determined by the client. The contract forces clients to take responsibility for their behaviours. The activity-oriented approach, utilizing the contract, allows the therapist to choose activities which are relevant to the areas the client would like to change (Giles, 1985; Giles & Chng, 1984).

Treatment approaches from the cognitive-behavioural frame of reference have a similar purpose of attempting to change behaviour by influencing cognition. Identified treatment approaches, and activities include the following: food diaries; journaling; stress management techniques; assertiveness training; crafts; social skills training; relaxation training; education concerning, and engagement in, physical exercise; body image therapy; coping skills training during meal preparation, clothes shopping, eating a meal; money management; use of video equipment; and education concerning ED (Bailey, 1986; Beck, 1993; Giles & Allen, 1986; Giles & Chng, 1984; Martin, 1991).

Recent research suggests that treatment of choice for ED is a combination of behavioural and cognitive techniques (Fairburn, Jones, Peveler, Hope, & O'Connor, 1993; Freeman, 1995; Garner et al., 1993). Research has been conducted to evaluate the effectiveness of cognitive-behavioural therapy with clients with bulimia nervosa (Agras, et al., 1992; Fairburn et al., 1993; Garner et al., 1993). These studies have indicated that cognitive-behavioural treatment is effective in decreasing psychiatric symptoms, and improving psychological variables, such as self-esteem (Agras et al, 1992; Fairburn et al., 1993; Garner et al., 1993). These interventions were employed by psychiatrists, clinical psychologists and medical doctors. In addition, these studies investigated the effects of cognitive-behavioural therapy with individuals who are diagnosed with bulimia nervosa exclusively. It would be more applicable if occupational therapists could conduct research to investigate the effectiveness of these cognitive behavioural interventions using functional outcome measures such as performance in self-care, productivity and leisure.

One descriptive study of occupational therapy interventions has been conducted by Bridgett (1993), who described

an eating disorder programme at Newington Children's Hospital, which she classifies as using the behavioural, and functional frames of reference. She stated that this eating disorder programme uses treatment techniques to address distorted body image, assist in increasing awareness, time management, and stress management skills. Bridgett reported that, throughout intervention, clients gain self-awareness and become able to identify and learn new ways to meet their physical, cognitive, and emotional needs. She does not include a case study in her description.

There have been three case studies using the cognitive-behavioural frame of reference. Meyers (1989) described a case study using naturalistic inquiry. Data collection consisted of interviews and observation of the participant in her natural environments. The participant was a woman who reported her occupational therapy experience while in hospital. The participant felt that the occupational therapist was confrontative, challenged her thoughts and taught her alternative coping strategies for stressful situations outside of the hospital. Through the use of crafts, clothes shopping, process groups, and body image therapy, the participant felt as if she was exploring her strengths and weaknesses and gradually "was able to feel more congruent" (Meyers, 1989, p. 40). The results of the case study, from the participant's perception, were successful. Limitations of this type of research, such as the inability to generalize to other clients with similar diagnosis, were acknowledged by Meyers.

Two case studies were reported by Breden (1992) at the Sheppard Pratt Hospital, that used the cognitive-behavioural frame of reference, in conjunction with the psychoanalytical frame of reference. The first case study described the participant's history, her assessment and treatment while in hospital. The second case study did not describe the participant's history. It provided information regarding the intervention the participant received, and the outcome of her case. Both case studies used treatment approaches from the psychoanalytical frame of reference, with the purpose of expressing emotions. However, the majority of treatment techniques were from the cognitive-behavioural frame of reference: stress management skills, meal preparation, task skills, and assertiveness communication, with the purpose of addressing cognitive distortions to influence behaviours.

Results of the case studies were conflicting. The first participant, after intervention at this eating disorder unit, continued to believe that her behaviour cycle of bingeing and purging was the most effective way to alleviate stress. The only positive outcome identified was that the participant engaged in new leisure roles. Results of the second participant case study were not as clear. Breden (1992) stated that the participant appeared to make gains while in therapy, but that she continues to be seen as an outpatient. Both case studies used functional and subjective outcome measures, such as clinical

observation (Breden, 1992). These measures are useful, but it would have been helpful to include an objective measure of improvement. The author did not account for the differences in the outcomes of the case studies.

Meyers (1989) and Breden (1992) both reported case studies consistent with the cognitive-behavioural frame of reference. Breden stated that she used both the cognitive-behavioural frame of reference and the psychodynamic frame of reference. As with previous authors, this combination makes it difficult to assess which frame of reference and treatment technique contributed to her successful outcome. In regards to choosing a frame of reference, Breden claims that in "occupational therapy, the frame of reference used depends on the particular functional activity being performed" (p. 54). It may help clarify her approach, if she were to allow her chosen frame of reference to guide her treatment approaches, and thus her activities, rather than allowing her activities to guide her frame of reference.

Both case studies are limited in their ability to generalize to other populations. However, they do provide valuable and descriptive information in regards to the treatment of individuals with ED, particularly Meyers' (1989) case study. It not only provides in-depth information concerning the intervention used, but allows the reader to understand a client's perception of the occupational therapy intervention. Further quasi-experimental, and experimental type research should be done to determine the effectiveness of this approach, because it appears that it is commonly used (Lim & Agnew, 1994).

The final frame of reference which will be reviewed, the Model of Human Occupation (MOHO), by Kielhofner (1995), is commonly used in treatment settings (Lim & Agnew, 1994). Barris (1986) advocates using the MOHO for "...exploring the nature of occupational dysfunction that accompanies eating disorders.." (p. 28). Similarly Kerr (1990) advocates the use of the MOHO and a variety of related assessments (as cited in Beck, 1993). Barris provided an overview of the use of the MOHO with a client with an ED, and described an individual's volition, habituation, performance, and the environment. Barris described possible treatment techniques that form this framework, which include: use of play to increase comfort in social settings; expansion of an individual's peer network; use of a journal to help increase awareness of rationale for engaging in tasks; and use of time management to help decrease the need for control.

Barris, Dickie, and Baron (1988) published a quasi-experimental study, with the purpose of attempting to "provide empirical validation" of the use of the MOHO with psychiatric clients (p. 6). Barris et al. collected information on 152 participants, three groups of psychiatric clients, and one group without any known psychiatric illness. Tests of significance were not completed on these groups to statistically document any differences among them. Groups one, two, and three, consist-

ed of individuals with chronic conditions, ED, and adolescents hospitalized for psychiatric disorders, respectively. Group four consisted of participants with no known illnesses. Groups one, two, and three, were gathered from one of six hospitals. Persons in group four, which consisted of both adults and adolescents, were gathered from occupational therapy assistant students, occupational therapy students, acquaintances of the investigators, and children of colleagues. Groups one, two, and three excluded individuals who were unable to read and write. The intervention consisted of six instruments. Four of them were paper and pencil tasks, and others were administered by interview by a different therapist at each setting. The instruments were: Life Attitude Profile, Internal-External Scale, Role Checklist, Prevocational Evaluation of Rehabilitation Potential, Family Environment Scale, and Role Performance Scale (Barris et al., 1988). Standardization of the intervention was attempted, by providing a videotaped protocol of instrument administration, but this instruction cannot eliminate all variations of administration of the instruments. The clients with ED performed consistently higher on evaluations of skill, in comparison to the two other groups of psychiatric clients (Barris et al., 1988). This group had an external sense of self-control and "lacked a sense of purpose and meaning in life" (Barris et al., 1988, p. 12). The participants productive roles were not impaired, although the authors did not provide any explanations for these results.

This quasi-experimental study was a good attempt at establishing the applicability of the MOHO. However, there was several limitations that rendered the results weak, and difficult from which to draw conclusions. These limitations were acknowledged by Barris et al. (1988). Firstly, the normal and psychiatric groups were of unequal numbers. Secondly, data collection for all of the instruments was non-standardized, due to the variety of therapists completing the instruments. Thirdly, there were missing client data for some instruments, making the results more difficult to analyze. Finally, the participants were all gathered from different hospitals, in different geographical areas (Barris et al., 1988).

The numerous methodological errors rendered the results more problematic to generalize to similar psychiatric populations. However, quasi-experimental research, although not having the strictest controls, attempts to provide empirical evidence that is stronger than case studies or other non experimental designs (DePoy & Gitlin, 1994). This study, investigating MOHO, is the only quasi-experimental research on any of the frames of reference previously discussed, and is a basis from which to conduct further research on the use of MOHO as a frame of reference.

As seen by the review of current literature, there is a lack of empirical evidence validating the effectiveness of the frames of reference and treatment approaches currently being used by occupational therapists working with clients with eating disor-

ders. There are numerous reasons for this weakness in research. First, occupational therapy intervention with this population has recently become more specialized. Prior to specialized eating disorder units, these clients were on general psychiatric wards and therefore did not receive treatment geared directly towards their multiple problems. Secondly, throughout the descriptions of Eating Disorder Units, there did not appear to be a shared understanding of a frame of reference. Authors either did not state their framework, or seemed to mislabel it at times (Bridgett, 1993; Meyers, 1989). Ideally, the profession should use common definitions. This may be too difficult, and therefore as an alternative, authors could state their definition of a frame of reference, in their study. Thirdly, Giles and Allen (1986) propose that the occupational therapy services are underutilized due to lack of promotion on behalf of occupational therapists themselves, and other professions lack of knowledge of our services (Giles & Allen, 1986; Lim & Agnew, 1994). Fourthly, Mosey (1989) asserts that the lack of occupational therapy research is due to limited time and individuals performing research. Lastly, due to the present economic climate, there are less funds available to conduct research in the clinical setting.

Although there are many reasons for the lack of research concerning the treatment of individuals with ED, occupational therapists should attempt to produce the strictest research possible. Research is especially urgent in this day and age, with health care dollars being routed to services that can prove their effectiveness. Individuals conducting research could start using quasi-experimental, and experimental type designs which allow the investigator to state causal relationships, and make greater generalizations to other populations (DePoy & Gitlin, 1994). This research should use a combination of objective and subjective outcome measures, which will detect evidence of success.

Research should focus primarily on the legitimacy of the frames of reference and treatment techniques so that the occupational therapy profession can be ensured of the "...delivery of effective services" (Mosey, 1989, p. 199). Another important topic that could be investigated is the phenomenon that clients with ED rarely have difficulties in their productive roles (Barris et al, 1988; Giles & Allen, 1986; Giles & Chng, 1984). If occupational therapists were to determine what resources and skills individuals with ED possess which enable them to engage successfully in a productive role, some of these same resources and skills could be optimized in other areas of occupational performance. A second phenomenon that reoccurred in the literature, is that clients with ED do not experience a sense of effectiveness or satisfaction with the tasks in which they successfully engage (McColl et al., 1986). It would be interesting to ascertain whether occupational therapists are not assisting these individuals to engage in meaningful tasks, or if this pervasive sense of dissatisfaction is a symptom of the ill-

ness. These topics could be researched to discover how occupational therapy could be tailored more specifically to this population.

In conclusion, this paper has established that occupational therapy interventions with clients with ED are felt to be valuable by many clinicians, although there is a lack of research validating this claim (Giles, 1985; Rockwell, 1990). Giles (1985) states that occupational therapy "is vital in linking the practical, emotional, and cognitive aspects of the treatment of an anorexic or bulimic individual" (p. 517). Despite the lack of research in this field, occupational therapists should not be impeded from researching and implementing the highest quality of care with clients with eating disorders.

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