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The Battle for Control: Why Dance/Movement Therapy Should be the Foremost Therapy for the Treatment of Eating Disorders: A Literature Review

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Abstract

This review will provide an explanation of the complexities and symptoms surrounding eating disorders, including etiology, barriers and stigmatization, and current treatment provided. There is a focus on the three most common eating disorders, anorexia nervosa, bulimia nervosa, and binge-eating disorder. Dance/movement therapy has been shown to be an effective treatment for this disorder, and this review demonstrates the main themes found in literature surrounding the psychological symptoms, including body image, control, and identity. This literature review outlines the need for DMT within this population, five DMT frameworks that are currently working with eating disorders, as well as why it should be viewed as the most prominent therapy for work with eating disorders. Also provided is the role that a dance/movement therapist plays to create healthy practices and interventions for this population.

Keywords: Dance movement therapy, Eating disorders, Body image, Control, Identity

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"Anorexia is… My accomplishment and punishment that I control victories and failures… A shield that keeps me safe from hurt, failure and disappointment… Control – if I carry it with me, I feel I'm in control of my life, taken away I lose the battle."

– Poem excerpts (Woods, 2009, p. 107)

Introduction

Dance/movement therapy (DMT) is the "psychotherapeutic use of movement to promote emotional, social, cognitive, and physical integration of the individual" (American Dance Therapy Association [ADTA], 2020). The focus of DMT is placed on the body, rather than the mind, and establishes connection between self and body. DMT has the unique ability to access internal causes and motivations that might be overlooked or inaccessible in cognitive-based therapies. For this reason, DMT is a beneficial therapy for the eating disorder population. Since the symptoms are experienced through the body, DMT has the ability to draw out meanings and feelings from movement that "words alone cannot" (Tropea & Kleinman, 2022, p. 187).

This literature review will discuss how DMT can address the primary three types of eating disorders, including anorexia nervosa (AN), bulimia nervosa (BN), and binge eating disorder (BED). Anorexia nervosa is generally described as the fear of gaining weight, refusal to maintain a normal weight, and an inaccurate understanding of a "normal" body shape, size, and weight (Rikani et al., 2013). Bulimia nervosa involves the binging of food with some sort of compensatory action, typically done through regurgitation, but also with the use of laxatives or excessive exercise (Rikani et al., 2013). Often people with BN are an average weight, which can cause this disorder to go unnoticed. People with binge-eating disorder (BED) will eat a large amount of food within a short period of time without any type of purging. Binge-eating disorder

was only recently included as a classified diagnosis in the DSM-V, despite studies showing that it is more pervasive than bulimia nervosa and anorexia nervosa combined (Wooldridge, 2022).

While each of these eating disorders has their own symptoms, some general behaviors include “body weight concerns, body image problems, eating habits, and weight management” (Woods, 2009, p. 106). People with an eating disorder desire control over their environment, which results from a variety of factors. Kleinman, a dance/movement therapist (DMT) specializing in eating disorders, notes that eating disorders often develop when an individual feels “vulnerable” (Chaiklin & Wengrower, 2015, p. 140). Often someone with an eating disorder has difficulty adapting to a change or transition in life, and the eating disorder serves as a solution (Chaiklin & Wengrower, 2015). The control over food becomes a maladaptive coping mechanism, which the individual can easily have success over. These behaviors disconnect the body from the mind, as they view the body as a separate entity from themselves, causing the individual to feel lost and in a state of survival (Tropea & Kleinman, 2009).

Currently, one of the most prominent treatments for eating disorders is cognitive behavioral therapy (CBT), alongside other cognitive and behavioral based therapies. While there have been successes with these therapies (Linardon et al., 2017), they neglect to bring the focus of therapy back to the body. An eating disorder is a mental illness, but it is manifested in the body and therefore needs a treatment that will re-center the individual to their bodily cues and sensations. Individuals with eating disorders often have difficulty identifying and verbalizing their emotions due to their dissociation from their bodies (Tropea & Kleinman, 2009). When the focus of therapy is purely cognitive or behavioral, the underlying reasons for the maladaptive behaviors often get overlooked, which makes these forms of therapy less valuable than a therapy that is body-based. DMT works to provide body awareness, reunify the body and mind

disconnect, re-establish positive body image, form healthy and effective coping mechanisms, and allow for an identity outside of the eating disorder.

Though the etiology of eating disorders is multifaceted, there are certain jobs and careers that have more connections with the onset of this disorder, including sports, modeling, and dance (Shapiro, 2012). Having grown up in the dance world, I have seen firsthand how this mental illness can impact peoples' lives. In many cases, people who show signs and symptoms of eating disorders in the dance world are glorified. Specifically with ballet, being lean and flat chested, with visible bones through the skin, is the look that is accepted and highly sought after (Swami & Harris, 2012; Lakhani & Szkudlarek, 2020). Dancers tend to have perfectionistic qualities, as do people with eating disorders. In structured dance, such as ballet, to achieve the right lines, correct amount of turns, or the ability to fly six feet through the air, one must continually practice and perfect their skills. Unfortunately, this compulsion for perfection can contribute to an eating disorder, as being thin and having less weight can also help to achieve these goals.

Purpose and Methods

Eating disorders and dance often go together, and the purpose of this review is to provide the most effective and beneficial ways to treat not just the symptoms, but the core causes of this disorder. A thorough discussion of both the disorder as well as dance movement therapy provides the framework for exploring specific strategies therapists can use to support their clients. For the purpose of this literature review, I utilized peer-reviewed articles and books, and websites dedicated to eating disorders or dance/movement therapy. Within these books and articles, there were many case studies that provided qualitative information for this review. Also obtained were evidence-based, quantitative articles and books that provided statistics and facts about eating disorders. To obtain these sources, I was able to use the Lesley University library,

Proquest, Google, and Google Scholar to provide accurate information. I used a variety of search words such as “dance/movement therapy,” “eating disorders,” “qualitative,” “quantitative,” “body image,” “self-esteem,” “etiology,” “cognitive behavioral therapy,” “control,” “treatment,” and other key words that relate to this topic.

Literature Review

What is an Eating Disorder?

Eating disorders have disrupted the lives of 9% of the population in the U.S. and worldwide (National Association of Anorexia Nervosa and Associated Disorders [ANAD], 2021). While eating disorders are often seen as physical behaviors and symptoms, eating disorders are classified as mental disorders. As defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), an eating disorder is “characterized by a persistent disturbance of eating or eating-related behaviors that results in the altered consumption or absorption of food that significantly impairs physical health or psychosocial functioning” (American Psychological Association [APA], 2013, p. 329). There are many types and sub-types of feeding and eating disorders, including anorexia nervosa, bulimia nervosa, binge-eating disorder, avoidant/restrictive food intake disorder (ARFID), pica, rumination disorder, other specified feeding or eating disorder, unspecified feeding or eating disorder, orthorexia, laxative abuse, and compulsive exercise. However, not all of these have been classified in the current DSM-V.

As conveyed through the quote at the beginning of this review, control is a central theme for people with eating disorders (Woods, 2009). When the environment seems out of control, the eating disorder serves as a coping mechanism (Churruca et al., 2020). It creates a sense of protection and safety for the individual and diminishes the vulnerability they might feel. The eating disorder becomes a sense of power and pride because they believe they have more control

over their bodies than the average person (Padrão & Coimbra, 2011). In turn, it creates a numbness for the person (Chaiklin & Wengrower, 2015) and disconnects their mind and body, often displaying alexithymia, the difficulty in expressing emotions (Chaiklin & Wengrower, 2015). Individuals view their bodies as something separate from themselves to control. They struggle finding emotional tolerance, and do not handle change or challenges in life well (Woods, 2009). The eating disorder often stems from a transition – such as marriage, divorce, loss of job, graduating, death, or simply growing up (Chaiklin & Wengrower, 2015; Rehavia-Hanauer, D., 2003). Additionally, the eating disorder sometimes acts as a form of self-harm, and they use this method of coping to punish themselves (Woods, 2009).

Due to many factors, individuals tend to isolate themselves, as an eating disorder "can be a good excuse to keep me away from others… it ensures I don't get close or comfortable with anyone or anything and keeps me on guard" (Arkell & Robinson, 2008, p. 653). The eating disorder perpetuates a cycle of continued isolation, which reduces interpersonal skills. They have a hard time trusting themselves and others and find it easier to trust in the eating disorder. People with eating disorders often have low self-esteem and find themselves unworthy of eating as well as unworthy of treatment (Churruca et al., 2019; Liu et al., 2022).

The eating disorder becomes their identity (Churruca, 2019), and without the eating disorder, they believe they have nothing – they believe they are nothing. "For an individual with AN, self-worth is based on the individual's beliefs about their shape and weight" (Cohen et al., 2004, p. 30). It is not just easier to continue in the eating disorder, but rather, they feel like they will lose themselves and their source of control and power if they let it go. People with this disorder often find it as a familiar and reliable way to avoid life and feelings, stay disciplined,

and find purpose for themselves (Arkell & Robinson, 2008). The question becomes: "Who am I without my eating disorder?" (Padrão & Coimbra, 2011, p. 136).

Introduction to Anorexia Nervosa, Bulimia Nervosa, and Binge-Eating Disorder

The three most well-known and prevalent eating disorders are anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED). Eating disorders can generally be characterized by "intense preoccupations with eating, weight or body image, disturbances of eating behaviors leading to altered food ingestion, and impairments in affected individuals' physical and mental health" (Sansfaçon, 2017, p. 2), regardless of the type of eating disorder. Though BED is the most recently classified eating disorder of the three in the DSM-V, it has the highest lifetime prevalence at 3.5%, compared to .9% for AN and 1.5% for BN (Sansfaçon, 2017). The onset of AN typically begins in mid-adolescence, though it can occur at any time (Shapiro, 2012). BN often develops in later adolescence and into adulthood (Shapiro, 2012). Reports show BED typically starts in adulthood (Striegel-Moore & Bulik, 2007). While eating disorders most commonly affect women, men can also suffer from eating disorders (Striegel-Moore & Bulik, 2007). Unfortunately, many men do not come forward to receive treatment for their illness, and therefore there is not as much information on this demographic (Striegel-Moore & Bulik, 2007). Eating disorders also come with a range of psychological and medical co-morbidities, which can be found in more detail in Appendix A.

Anorexia nervosa (AN) is the most well-known eating disorder and has the highest mortality rate of all psychiatric diagnoses, ranging from 5 % to 15% (Shapiro, 2012). This often results from malnutrition but can also be a result of suicide (Shapiro, 2012). The primary characteristics of AN include the refusal to maintain normal body weight and having a fear of gaining weight. People with AN are typically underweight due to self-starvation (Padrão &

Coimbra, 2011). AN primarily affects women from age 10-39, and on average lasts six years (Arkell & Robinson, 2008). AN has the highest hospitalization rate of eating disorders, with a large part of treatment being weight restoration. Just under 50% of people with anorexia nervosa recover fully from this disorder, approximately 30% improve, while around 20% progress to "severe and enduring eating disorder" (SEED-AN) (Rikani et al., 2013; Arkell & Robinson, 2008, p. 650).

Bulimia nervosa (BN) is typically characterized as a disorder in which an individual binges and then rids the body of the food – typically through purging, laxatives, or sometimes excessive exercise (Churruca et al., 2019). BN is more common than AN, though in the past it has been seen as "anorexia's ugly sister" (Churruca et al., 2019, p. 288) and was originally seen as an "ominous variant of anorexia" (Striegel-Moore & Bulik, 2007, p. 182). When BN was first introduced as a disorder, there had previously been a syndrome known as "binge-purge syndrome" that stemmed from the societal standard of thinness and was first acknowledged by Boskind-Lodahl (Striegel-Moore & Bulik, 2007). Typically, the treatment that has been used for BN is CBT and is more effective with BN than AN (Linardon et al., 2017). The use of CBT with BN is to change negative thoughts and behaviors of binging and purging. Despite CBT being the most well-known treatment for BN, there are high drop-out rates from treatment of up to 50% (Churruca et al., 2019). Many people who complete treatment are not able to sustain it outside of treatment, as CBT focuses on treatment and not maintenance during recovery (Churruca et al., 2019). Often BN can go unnoticed as many people with this disorder are of a relatively "normal" weight according to medical and societal standards.

Binge-eating disorder (BED) is the newest eating disorder classified in the DSM-V (APA, 2013), though it was known previously as a subtype of the Eating Disorder Not Otherwise

Specified (EDNOS) classification. BED is characterized as the excessive binging of food in one sitting (Wooldridge, 2022), and unlike bulimia, there is no compensatory behavior to clear the body. BED often develops later in life and can become part of a continuing cycle of dieting and binging behavior (Starkman, 2015). People with BED often are overweight, with 45% of them being medically obese (Starkman, 2015). While women make up a large majority of people with AN and BN, about 36% of people with BED are male (Wooldridge, 2022). Individuals with BED often experience a loss of self-regulation and have "difficulty differentiating between emotional distress and physiological cues for hunger" (Starkman, 2015, p. 57). Current research shows some progress with the use of CBT, interpersonal therapy (IPT), and dialectical behavioral therapy (DBT) (Starkman, 2015), though there is difficulty in maintaining improvement and recovery. Mindfulness-based interventions have recently been given attention as a treatment for BED (Starkman, 2016), as it focuses on self-regulation, and particularly the connection of emotions with binge eating. As BED is the most recent of the classifications, continued research is needed for the most efficacious treatments.

Etiology of Eating Disorders

There has been much research done on the etiology of eating disorders. Throughout the studies, some of the prominent discourse has included sociocultural (Rikani et al., 2013), biological (Striegel-Moore & Bulik, 2007), trauma-based (Holmes et al., 2022), and psychological (Padrão & Coimbra, 2011) variables. While sociocultural standards play a large part in the onset of eating disorders, it has been shown that there are biological and genetic factors that contribute to eating disorders. There has been research done on twins which reports the hereditability of an eating disorder (Shapiro, 2012), showing a rate of 48% for AN, 50 to 83% rate for BN, with 41% for BED (Striegel-Moore & Bulik, 2007). Additionally, there have

been studies on the hypothalamus, the part of the brain that controls hormones, which can contribute to eating behaviors. A lower-functioning hypothalamus might contribute to the development of AN, due to unregulated levels of serotonin and dopamine, which help regulate eating (Shapiro, 2012). Also present in people with BN are the lower levels of serotonin, which could contribute to craving specific foods (Shapiro, 2012). Another function of serotonin is mood regulation, which could play a part in certain personality traits of people with eating disorders, such as perfectionism, anxiety, and obsessive behavior (Rikani et al., 2013).

As could be expected, anorexia nervosa is often associated with the ideal sociocultural standard of thinness, largely in Western and industrialized countries (Chaiklin & Wengrower, 2015), but also non-Western countries such as Japan, Iran, and Singapore (Rikani et al., 2013). With the use of media, and more specifically social media, there has been an influx of the idea that thin is beautiful, and anything else is less than beautiful. To attempt to fit into society and the culture, many women and girls, as well as some men and boys, feel a pressure to lose weight to increase attractiveness. Acculturation to a societal normative look plays a large part in the development of eating disorders (Rikani et al., 2013), or other disorders involving the body. These impossible standards are changing the world we live in and giving people unrealistic expectations of how to maintain their bodies. Other societal factors might include economic status and social anxiety (Striegel-Moore & Bulik, 2007), which can stem from trying to find a place in this world, and one's own self-identity.

Certain personality traits have also been associated with eating disorders, including perfectionism (Rikani et al., 2013), "obsessive-compulsive behaviors, rigid inflexibility, and preoccupation with detail and intolerance of uncertainty" (Woods, 2009). People who have a drive to be perfect or are in jobs or a career which requires a certain look for them may become

more dissatisfied with their bodies. Perfectionism is often then reinforced when people are praised for the control they have over their bodies, or if they fit into the society's idea of "beautiful." This trait pushes people to go beyond normal limits to achieve certain expectations.

Trauma is another factor in the development of eating disorders. Research shows there are links between childhood trauma, whether it be of a sexual nature, emotional abuse, or neglect (Holmes et al., 2022), and eating disorders, as well as adulthood trauma such as sexual assault. Trauma has a heavy influence on how a person views themselves. They lose a sense of safety, trust in others, and self-esteem (Holmes et al., 2022). People who have had a traumatic incident of this nature can shut down and lose their sense of identity. The trauma takes away their sense of self-agency, leaving the person feeling lost and out of control of their own lives. The eating disorder becomes their source of control, their coping mechanism (Chaiklin & Wengrower, 2015), a way to soothe themselves (Holmes et al., 2022), and eventually, their whole identity.

Some of the psychological factors are perception of body image and self-esteem. Studies showed three "areas of dysfunction," including "body image, perception of bodily sensations, and the sense of self-efficacy" (Bruch, 1973, as cited in Padrão & Coimbra, 2011, p. 132). Due to societal standards, there are many people who become dissatisfied with their body image, resulting in taking actions to conform to what is perceived as ideal, such as control over their food intake. When one has a negative image of their body, they lose confidence in themselves (Woods, 2009). Often self-worth, self-esteem, and their own self-efficacy deteriorates, leaving a person as a shell, devoid of human emotion and interaction. Because they have a low view of themselves, they find themselves undeserving and unworthy of eating (Woods, 2009). While a distorted view of body image and a lack of self-esteem can be a cause of eating disorders, an eating disorder itself continues a vicious cycle of self-loathing (Shapiro, 2012).

When a person has a distorted perception of their body, their body and mind become increasingly more detached, resulting in a loss of body awareness. Recent studies (Padrão & Coimbra, 2011) have investigated interoceptive awareness, which is the idea of one being able to identify intrinsic sensations and the ability to respond accordingly. People with eating disorders often develop and are prone to alexithymia, the inability to identify and respond with emotions. Not only does the lack of interoceptive awareness result in a loss of emotion, but it also creates an inability to decipher the sensation of hunger and satiety (Padrão & Coimbra, 2011).

Stigma and Barriers

Despite the substantial amount of people affected by this disorder, there still remains a stigma, defined as a "negative characteristic, attribute, or identity that an individual either possesses, or is believed to possess, that conveys a social identity that is devalued or discredited in a social context" (Roberts, 2016, p. 64). Research shows people avoid going to treatment due to this (Liu et al., 2022), and mental illnesses tend to receive more stigmatization than physical illness because they are invisible to the naked eye. People with mental disorders, including those with eating disorders, are "stereotyped as dangerous, childish, incompetent, weak, and responsible for their condition" (Brelet et al., 2021, p. 2). People with eating disorders are told to stop as if it is a physical choice by the individual, and eating disorders have been referred to as "vanity run amok" (Striegel-Moore & Bulik, 2007, p. 193). This stigmatization creates a sense of shame and secrecy for the individual (Laberg et al., 2001), which is often internalized and contributes to a lack of self-esteem and confidence, keeping people from seeking treatment (Brelet et al., 2021). The stigma causes many people to isolate themselves. Some don't want to "lose" their eating disorder, but others don't want it to affect how others view them. This directly impacts the individual on "cognitive, affective, and self-evaluative levels" (Roberts, 2016).

Besides the stigma which keeps people from seeking treatment, studies have determined that some of the strongest barriers to seeking or receiving treatment is the "fear of losing control, fear of change, and lack of motivation" (Liu et al., 2022, p. 2). Some individuals have distorted self-perception and believe that they don't deserve it; they are "not sick enough" for treatment (Liu et al., 2022, p. 5). They feel ashamed of their condition and are fearful to let their friends and family find out (Shapiro, 2012). Others simply don't want to put their life on hold to attend treatment (Liu et al., 2022). Another challenge is the negative view of medical professionals and health care. Some of these individuals do not trust the health care system because they have had poor interactions with clinicians who did not take their eating disorder seriously (Liu et al., 2022). Within the health care system, it was shown that inexperienced clinicians and nurses were more likely to be less competent with eating disorders and stigmatize them more than experienced clinicians (Brelet et al., 2021). Even among medical professionals, eating disorders can be trivialized, and people with eating disorders either are told it's not important to receive treatment, or their feelings and fears are belittled by those who are supposed to help them.

Current Treatment for Eating Disorders

There is a wide range of treatments used for people with eating disorders. Particularly for people with AN, the first necessity, medically speaking, is to work towards weight restoration and nutrition. This is often done through inpatient hospitalization, day patient treatments, and outpatient treatments (Shapiro, 2012). Psychologically speaking, there are many forms of therapy and treatments that have been utilized. Some of these include CBT (Churruca et al., 2019), IPT (Linardon et al., 2017), mindfulness-based skills (Starkman, 2015), family therapy (Grilo & Mitchell, 2009), psychodynamic (Grilo & Mitchell, 2009), and integrative factors (Starkman, 2015). Also used are pharmacological treatments, though there is not a specific medication for

eating disorders (Shapiro, 2012). Rather, the use of anti-depressants with eating disorders is common (Cohen et al., 2004). More details about these treatments can be found in Appendix B.

The most common form of psychotherapy for eating disorders is CBT. Many trials and studies have used CBT to determine its efficacy of treatment for eating disorders (Linardon et al., 2017), and it is the most empirically supported treatment (Churruca et al., 2019). CBT focuses on the cognitive and behavioral distortions that are present in someone with an eating disorder, which can include poor body image and self-esteem, lack of self-regulation, misperception of shape and weight (Padrão & Coimbra, 2011), and a general lack of trust in themselves (Woods, 2009). CBT has been shown to be most effective with BN and BED, while only minimally effective with AN (Linardon et al., 2017). The goal of CBT is to help establish regular eating habits in place of the maladaptive behaviors of BN and BED, including the binging and purging (Churruca, et al., 2019). Regular eating habits can also be supported by coping skills, which can include going for a walk, reading a book, meditating, listening to music, or anything that the individual can do instead of focusing on food or purging. Having these coping skills can help replace their distorted behaviors and provide something to take its place. While CBT does not necessarily help with weight loss for BED, CBT can still be used to find the coping skills necessary for the individual. CBT is often used in conjunction with weight loss treatments for BED, though there continues to be a need for more research on the effectiveness of these two treatments combined (Shapiro, 2012). CBT has also been a primary treatment for AN, though it has been shown through research that it is not as effective with AN as with BN and BED (Linardon et al., 2017) in the beginning stages of recovery.

Other effective and commonly used treatments include interpersonal therapy (IPT) and mindfulness-based treatment. IPT is a short-term therapy that has foundations in interpersonal

factors that influence an individual. IPT has four focuses for use with clients with eating disorders, including grief, interpersonal disputes, interpersonal deficits, and role transitions (Shapiro, 2012), which correlate with symptoms of eating disorders. IPT has been shown to be effective largely with BN, which focuses on the present, rather than the past (Cohen et al., 2004), and is beneficial in reducing binge eating (Shapiro, 2012). However, it has not been as effective in reducing purging behaviors or thought distortions about one's body (Cohen et al., 2004). Despite IPT having success with BN and BED, there has been little research done on its effects with AN (Cohen et al., 2017). IPT has shown to be efficacious in lasting improvements past a year (Cohen et al., 2004), but it is also noted that it takes longer for results to happen in the immediate present (Linardon et al., 2017). While CBT is still more highly recommended than IPT, IPT has shown its usefulness in the field of eating disorders (Linardon et al., 2017).

Another current treatment for eating disorders that is on the rise is mindfulness-based treatments. Mindfulness targets the connection of emotional regulation with symptoms of eating disorders (Starkman, 2015) by creating a non-judgmental attitude. It focuses on the connection between body and mind, so that an individual is more capable of connecting what their body needs with what their mind wants. Mindfulness-based interventions aim to disengage "from ruminative thought patterns while directly experiencing thoughts, emotions and body sensations on a moment-to-moment basis without judgment" (Starkman, 2015). This approach helps an individual increase interoceptive sensitivity to discern their emotional state and learn to self-regulate when having negative experiences (Shapiro, 2012).

Alongside the more cognitive-based treatments, the expressive arts therapies have also found their way into treatment for eating disorders. Expressive arts therapies include art, drama, music, and dance. Studies have shown that in residential treatments for eating disorders, when

artistic therapies were included in the program, residents grew in self-discovery and expression and were able to confront more challenging topics such as self-esteem, body image, and depression (Heiderscheit, 2015, p. 20). Using the arts takes the pressure off verbalization, with which people with eating disorders tend to have difficulty. The arts open doors for expression beyond what the brain can process and delves into the inner causes of the disorder.

Dance/Movement Therapy

Dance/movement therapy (DMT) is widely recognized as a beneficial form of psychotherapy that uses movement to nonverbally communicate and identify underlying emotions and meanings. DMT history stems from modern dance and is also based in psychotherapeutic methods and theories. The essence of DMT suggests that the "body and mind are inseparable" (Levy, 2005, p. 1). Dance has often been used for religious purposes as well as entertainment. In today's dance world, dance is often referred to as "therapeutic."

While the therapeutic side of dance that dancers often refer to is beneficial for general well-being, this is different from the psychotherapeutic use of dance in DMT. DMT is used to bring awareness back into the body and work towards identifying underlying meanings that are often difficult to verbalize. While many therapies are based in cognitive "top down" uses of therapy (Erickson, 2021), DMT focuses on "bottom up" (Tropea & Kleinman, 2022). This concept of "bottom up" processing means that we start from the emotional, body-based senses, and move towards a cognitive understanding, rather than the other way around (Tropea & Kleinman, 2022). It is often difficult to verbalize thoughts and feelings and find the "right words" to say, particularly for someone with an eating disorder. "Our ordinary language can be a prison, locking us in the jail of our own redundancies, dulling our senses, clouding our focus" (Siegel, 2007, p. 54 as cited in Lauffenburger, 2020, p. 22). In DMT, the need for the "right

words" disappears as there is a "prioritization of feelings over words" (Lauffenburger, 2020, p. 22), revealing underlying meanings that words often cannot express. Movement gives the body freedom from feeling stuck in our language.

DMT has been shown to do more than just provide a means for nonverbal communication. Research studies have shown that the use of DMT increases confidence (Gordon, 2014) and emotional awareness (Tropea & Kleinman, 2022) and has shown less reports of anxiety, depression and stress (Roberts, 2016). DMT has been known specifically to increase "motivation, coping, strength, energy and enjoyment, while depression, lifelessness, anxiety, tension, and tiredness decreased" (Gordon, 2014, p. 62). Trudi Schoop routinely used humor and play in her DMT sessions, finding this outlet of laughter and permission to act like a child increased the positive affect of her clients (Levy, 2005). DMT also gives way for self-compassion and self-reflection (Gordon, 2014) in a place of safety. DMT provides a way to identify negative behaviors and thoughts and "assist in the experience of empowerment" (Woods, 2009, p. 108). An individual can develop their own self-expression, strengths, and resilience through the use of movement (Woods, 2009). DMT challenges clients to be uncomfortable and confront their own distress tolerance. DMT promotes trusting oneself to know what is needed for healing and provision (Padrão & Coimbra, 2011). Additionally, DMT can help promote positive body image and self-esteem as one explores through body awareness and learning to be comfortable in one's own body (Roberts, 2016). DMT is holistic, encompassing the entirety of a person rather than what is only cognitively understood.

DMT with Eating Disorders

As DMT holds the unique position of connecting the body and mind, it offers a way to be a prominent therapy for eating disorders. While there is a gap in quantitative studies showing the

effectiveness of DMT with eating disorders, there are many qualitative research studies showing DMT's efficacy, as well as particular interventions and frameworks that work with eating disorders. Movement works to unify the body and mind, bringing to the forefront things that had not been understood or realized. As emotions are held within the body, the movement encourages these emotions to be lived and experienced in a bodily way, which invites the emotional and mental state to be reformed. As eating disorders are mental illnesses that present in the body, movement works to open the door into someone's internal state, rather than just the external symptoms. "One's movements and gestures often express and clarify the true meaning of communication when words alone cannot" (Tropea & Kleinman. 2022, p. 187).

While CBT is currently the primary approach for eating disorders, it has also been demonstrated that it does not have consistent effects, immediately or long term (Linardon et al., 2017). Participants in a study were asked to share their experiences in using CBT to help their bulimia. Participants felt that CBT focused too much on the disorder itself and not how to live after treatment was over. CBT often uses "homework" for participants to keep track of behaviors surrounding their illness, which another participant felt "inadvertently (reinforced) the eating disorder" (Churruca et al., 2019, p. 294). Participants in this study felt that CBT reminded them of their disorder and contributed to the idea that their whole identity was wrapped around their bulimia (Churruca et al., 2019, p. 295). The participants in this study wanted to focus on the "whole person" rather than the illness. Additionally, participants mentioned that there was nothing to "replace" the bulimia in their life. As eating disorders are often a sense of comfort and safety, they felt a lack of security in their life once they were in the recovery process. "Recovery from bulimia cannot be sustained simply by the absence of the ED [eating disorder]; it leaves a gap in the person's life that is too significant" without something to replace it (Churruca et al.,

2019, p. 296). As relapse of BN has been shown to be common, this insight provides an explanation for this outcome.

Many cognitive-based therapies work only with the symptoms and the idea that one can change the way of thinking to simply cure an eating disorder. People with eating disorders did not feel that this was sufficient for recovery, as the focus was only on the eating disorder, not the causes. Eating disorders cause a disconnection of body and mind, with an individual viewing their own body as an enemy (Roberts, 2016). A body-based therapy such as DMT is the most appropriate therapy to reunify body and mind and give way to recovery. Krantz states that because of this, "this population is uniquely suited for treatment in dance/movement therapy" (Krantz, 1999, p. 84). As an eating disorder is a maladaptive coping mechanism to feel control over one's environment, the therapy used for people with eating disorders must address this underlying factor of control. The form of therapy used cannot only strip the person of their eating disorder but must replace it with a coping mechanism to promote healing and continued recovery. DMT is used to support an individual intrinsically, working to heal the body-mind connection and develop healthy ways of coping with change and challenges. DMT encourages interoceptive awareness, to gain the ability to identify one's internal state and how to cope with emotions beneficially and effectively. Woods identifies some of the major aims of DMT with eating disorders as "development of body awareness, building a sense of self in the body, developing a sense of control and choice, and developing confidence in self in relation to others, developing a sense of self in addition to body self" (Woods, 2009, p. 110).

Body Image, Control, and Identity

Many clinicians might begin treatment for eating disorders with the weight aspect – whether to work towards putting on weight in the case of AN, or helping to reduce weight with

BED, and possibly BN. The current treatments put emphasis on changing the way a person thinks about their weight or about themselves, focusing more on the eating disorder than the client. Just as the clients view their own bodies as enemies, the current treatments focus on the eating disorder as something outside of the client. The superficial solution does not appear sustainable for people with eating disorders. What is needed is a treatment that will dig deeper than the weight and the symptoms and instead work from the inside out. While there are many emotional symptoms to work with in an eating disorder, the top themes of internal symptoms in an eating disorder are body image, control, and identity.

Literature shows that DMT has been useful in the area of body image, the first theme (Pylvänäinen, 2003). Body image can be understood as a way the body is perceived by itself through individual perceptions and sensations as well as a social phenomenon in which how a person views their own body is by their comparison to those around them (Pylvänäinen, 2003). Dance movement therapists view body image through relational aspects – what we see and hear from people around us, as well as how the body fits into the surrounding environment and culture. Pylvänäinen (2003) looks at three aspects of body image: image-properties, which are socially constructed, body-self, which is the "subject of experiences," and body-memory, the way that the body stores and remembers the past. DMT takes these concepts to a deeper level, with a more holistic understanding of how these intersect and can be reshaped to improve body image.

The second theme to be worked through is that of control. The idea of control runs across all levels of eating disorders, as typically the onset of an eating disorder is a change or challenge in a person's life. The body becomes an abstract concept to control, separate from oneself. People with eating disorders need to learn to be okay with releasing control and learning to

accept changes while gaining the ability to find better coping strategies when things happen out of their control. DMT provides new outlets for coping through movement exploration. DMT focuses on the internal and can help to create a safe space, even when externally things might be transitioning or feel uncertain.

The last main theme that should be addressed when working with eating disorders is identity. An eating disorder becomes the sole identity of a person, especially if the eating disorder is severe or has lasted for a long time. Not only does the ED become an identity, but it's all a person puts their trust in, as they no longer trust themselves. Without the eating disorder, they believe there is nothing important about them. There is nothing else they feel secure in, except knowing that the eating disorder will be their constant. There is no relationship with their body, let alone a healthy relationship. The eating disorder is what helps them survive whatever is going on in their lives. There is a void in who they are without the disorder. This concept of identity is the biggest hurdle to face. Treatment cannot just get rid of the eating disorder without replacing it with a true and more fulfilling identity for the client. The new identity has to be one that does not strip away every part of them, but rather empowers the client to trust themselves and take their power back.

DMT is designed to help someone become more attuned to themselves. It creates that safe space where one can go below the surface to understand what bodily reactions are happening and give permission to explore that. The body has a lot to say that the mind often does not. Through discovering what the body feels and allowing themselves to have no judgment on those discoveries, a person can begin to heal the parts of self that their eating disorder stripped from them. They can begin to rebuild their own perception of their body image. DMT helps to release the control and helps them understand why they felt the need to control something in the

first place. Lastly, they can take back who they are from the monster that is an eating disorder. By listening to their bodies and using movement to find the feelings and parts of themselves that they have left behind, they can re-establish their identity and choose the person *they* want to be.

Current DMT Frameworks and Practices

Over the years, many different ways of working with eating disorders have been developed in the DMT world. One of the most prominent frameworks, Cognitive Markers, was developed by Susan Kleinman at the Renfrew Center for Eating Disorders. Starting with the idea that people with eating disorders struggle to communicate, or even identify, their emotions, Kleinman focused on bodily-experienced interactions (Levy, 2005). This method works to begin a healthy, trusting relationship between the person and their body, in which they are often lacking. The markers include: 1. Explore an experience. 2. Make discoveries about what has been explored. 3. Acknowledge the discoveries. 4. Connect the discovery with a familiar pattern. 5. Integrate the connection with insight for the future (Tropea & Kleinman, 2022; Levy, 2005). Through these markers, an individual with an eating disorder can embody these experiences and discoveries. The movement creates an inner sensation that can be explored with the dance/movement therapist through continued movement, rather than depending on the right words to verbalize and explain, as is the case in other psychotherapies. These connections into their internal state can provide some of the intrinsic causes for the eating disorder, rather than focusing purely on the symptoms that manifest (Chaiklin & Wengrower, 2015). The therapist can then work with the client on how to heal from these deeper reasons for the eating disorder so that the client can move towards recovery.

Blanche Evan was one of the founding dance/movement therapists and worked with many populations, with some background in eating disorders. Anne Krantz then used the ideas

and methods of Evan to work directly with this population. Evan comes from a background of using psychodynamic concepts, including the unconscious, defense mechanisms and resistance (Krantz, 1999). She worked toward what she referred to as "healthy psychophysical unity" (Krantz, 1999, p. 85) with her clients. She described some of the goals of working with them as "overcoming of shame of the body; acceptance of the physical components of feeling; restoration of tonus; confidence in space; rhythmetized time; from destructive to function tension; postural realignment; outlet; insight through body channels" (Evan, 1966, p. 1 as cited in Krantz, 1999, p 86). Evan believed that these were some of the central tenets of DMT, which would give permission for a client to experience the sensations in their body and provide insight for themselves. Evan looked through the lens of sexuality in dance movement therapy, regarding different issues such as "self-image, autonomy, and self-assertion" (Krantz, 1999, p. 86). Krantz took the ideas and concepts that Evan presented on sexuality to specifically apply to those with eating disorders. She believed that eating disorders could be the result of not having permission to have a relationship with one's own body, as well as trauma that could have happened to the body, resulting in a disconnect or numbing of body and mind (Krantz, 1999). She believes that through DMT, these concepts can be made conscious, and perceived body distortions can be brought to the forefront and attended to (Krantz, 1999).

Evan used the idea of "physicalization" and "mobilization" as a foundation of her methods. Evan believed "physicality is primary" (Evan, 1981, as cited in Krantz, 1999, p. 88). By this, she meant that every session should begin with the body, rather than words, as the body provides more insight than verbalization. The second part of Evan's method included mobilization, which was an improvisation of movement from the client. Evan encouraged spontaneous movement without the opportunity to think about what actions the body was taking

in order to explore unconscious movements. When mobilization occurs, it allows the body to move in ways that are unknown to the client while allowing space for more sensation and interoceptive awareness. When a client doesn't have to think about what movement comes next, they can rely on their intrinsic feelings, often expressing more through their body than they would through their minds. It also provides an opportunity to express something that may be too shameful to say out loud, particularly in the case of people with eating disorders. The methods of Evan, as used with eating disorder clients by Krantz, provide an excellent foundation of how to use DMT with this population.

Another way of working with eating disorders with DMT is through a developmental model (Woods, 2009, p. 110). Working from the body-mind centering (BMC) framework, there are five fundamental actions identified that one learns as a child – yield, push, reach, grasp, and pull (Roberts, 2016). Each of these actions are a basic skill that children innately attain as they begin to move in life. From a DMT point of view, these five actions are also noticed in a therapeutic sense, which give understanding of a person's confidence and connection with the world. Additionally with the BMC concepts, one can identify other basic developmental actions that are necessary for a person to feel safe and supported in their lives. These actions are connected with an individual's internal thoughts and experiences, and if this development has slowed, it can demonstrate a retardation in one's own self-being and expression. The idea of BMC and developmental actions is that one can break down what is necessary for the individual and build upon each action to enhance their self-esteem, confidence, and connection internally and externally.

The BMC framework can be seen as an outline in the embodied identity development model. While this model has not specifically been used with eating disorders, the concept of

identity is a core theme to work with in this population and would be beneficial. This model continues to use the concepts of BMC and the five fundamental actions, with a focus on identity. The foundation of this model is structured from the idea of identity formation, stemming from E. Erikson's psychosocial development model, which views identity development as being based on "behaviors of exploration and commitment" (Erickson, 2021, p. 203). The second theory upon which this is based is narrative identity theory, which looks at how individuals tell the story of their own lives (Erickson, 2021). The embodied identity development model leans on both of these theories as they explore the concept of identity, and then uses embodiment and movement to explore inner bodily sensations. Caldwell states that body identity is "our core identity out of which our other identities are built. It is generated, preserved, and enacted by the body, via our explicit and implicit relationship to sensation, movement, and physiological processes, relationships, interactions, and bodily awareness of emotions" (Caldwell, 2016, p. 288, as cited in Erickson, 2021, p. 205). Reinstating a good body identity within people with eating disorders is crucial in the recovery process, and this identity can be developed through DMT.

The embodied identity development model uses the five actions of the BMC framework to become self-aware and create a better understanding of who an individual is in the present moment. These movements help to meet essential physical needs as a child, but when used therapeutically, they help people find rest and safety, a sense of self-support, motivation and curiosity, and fulfillment and nourishment of emotional, mental, and physical needs (Erickson, 2021). Upon the use of these actions, an individual with an eating disorder will be more capable of connecting with what their body is asking for, rather than using the body as something to control. The use of these movements creates interoceptive awareness, which can help an individual reconnect and reshape the way they view themselves and how they can support their

body. As someone with an eating disorder often labels the eating disorder as their core identity, this model is important to fill the void of the eating disorder with a new body identity and outlook on themselves.

More recently, a new model designed by dance movement therapists has been researched to use in in a program called Body Brave, which works with people with eating disorders. The researchers applied the Feldenkrais method of "Awareness Through Movement" (ATM) for their study (Lakhani & Szkudlarek, 2020) and focused on "perceptual changes of body awareness" (Lakhani & Szkudlarek, 2020, p. 306) with ED behavior. The researchers designed a method which was implemented by the staff and therapists at Body Brave. After each session, the researchers received feedback and insight, revised the structure, and then provided new material for the staff. The objectives for this method were to allow for artistry and creativity, work towards embodiment of a mind-body connection, provide a supportive environment, and "promote body neutrality," (Lakhani & Szkudlarek, 2020, p. 308) all while encouraging inclusivity of race, cultures, gender, able-ness, etc. The structure of the method was based on movement prompt cards, which included a nature scenario or animal with a description, a movement to go with it, an ideal environment, and any props or music to use. Over a few different sessions, these researchers were able to develop cards that were designed to be body neutral and a movement that was adaptable for all people, as well as a guide to go with the card for the facilitators (Lakhani & Szkudlarek, 2020). This type of movement prompt card was designed for people to be able to use without formal DMT training, but still allows for movement to be used with people with eating disorders in a creative, structured, and therapeutic way.

Therapist Attributes

For DMT to be beneficial for an individual, regardless of diagnosis, there are certain attributes that a therapist must have. First and foremost, the DMT must have a good therapeutic relationship with the client. In therapy, a client is asked to be vulnerable, and disclose aspects of themselves that they would not normally open to another person. The dance/movement therapist must provide good rapport as well as a trusting environment and relationship for a client to feel comfortable in the sessions. There are three concepts of dance/movement therapy that help a therapist to build that trusting foundation with a client: rhythmic synchrony, kinesthetic awareness, and kinesthetic empathy (Tropea & Kleinman, 2022). Rhythmic synchrony is the "ability to be in tune with ourselves and our patients" (Chaiklin & Wengrower, 2015, p. 145). It is essential for a dance/movement therapist to observe and notice the rhythm, movement, and dynamics of a client within a session. If a client is moving slowly, but the therapist moves quickly, there is an imbalance which can cause frustration or overwhelming sensation for the client (Chaiklin & Wengrower, 2015). The attunement also benefits the therapist as it allows the therapist to gain a better understanding of what is happening in the client's body. This leads to kinesthetic awareness, which is the therapist's ability to be mindful of one's physical, emotional, and cognitive self (Tropea & Kleinman, 2022). A therapist must observe all aspects of their own self, as it relates to the client, to develop and create an intervention that would be most beneficial to the client (Chaiklin & Wengrower, 2015). Lastly, observation and attunement can create kinesthetic empathy. Empathy is the ability to understand and share the feelings of another. Kinesthetic empathy then embodies the movements created by the client which can bring awareness to certain emotions or feelings consciously or unconsciously.

Discussion and Recommendations

The intent of this literature review was to discuss dance/movement therapy and how it can be used beneficially for people with eating disorders. Currently, the forms of therapy being used are beneficial, but not as effective in the long run (Linardon et al., 2018). Many of these forms of therapy focus on the cognitive side of an eating disorder, whereas the disorder manifests in the body. These types of treatment focus on how to change the thoughts of a person but does not dive deeper internally to the true reasons the person has the mental disorder in the first place. For these reasons, cognitive therapies should not be the primary forms of therapy for this population.

Many studies demonstrate how dance/movement therapy is a beneficial form of therapy to be used with eating disorders as it is an emotional problem that manifests in the body. DMT is designed to connect the brain to the body, which is what people with eating disorders struggle with. Many dance/movement therapists have used DMT as a method to help people with eating disorders. Kleinman presented the cognitive markers, which allow an individual to explore and discover new concepts from an experience and ultimately connect meaning and develop new ways of processing feelings and emotion in a healthy behavior (Tropea & Kleinman, 2022). Krantz uses Blanche Evan's DMT framework of physicalization and mobilization within the eating disorder population. With her clients, she was able to help them express feelings, change their view on body image and self-esteem, and help them manage their eating disorders (Krantz, 1999).

BMC has also been shown to help individuals grow in self-confidence, curiosity, rest, and safety (Roberts, 2016). Using these concepts, Erickson (2021) went one step further to bring the idea of embodied identity into the framework. She proposed that using these frameworks can

help someone increase their sense of interoceptive awareness, recreate their sense of self, and give them more general purpose and satisfaction with their lives (Erickson, 2021). This model of identity, when merged with DMT, can prove to be valuable for this population, as their main source of identity comes from their eating disorder.

Within this research, the idea of body image, control, and identity were observed to a great extent in the findings. Eating disorders are not just a desire to lose weight, but a bodily manifestation of self-protection as a coping mechanism to deal with changes or transitions in one's life (Tropea & Kleinman, 2022). People with an eating disorder have distorted perceptions of their body, resulting in a negative body image. They try to manage the distortion and unrealistic expectations for themselves through drastic measures of control over their environment (Chaiklin, & Wengrower, 2015), causing a loss of interoceptive sensitivity. They become numb to themselves, as they lose the ability to decipher internal sensations. The eating disorder becomes something that they can control and something that they can do successfully (Palmer, 2015). Without the eating disorder, they believe they are worthless, without their source of strength. Eventually the eating disorder becomes their identity and main reason for existence.

Dance/movement therapy is the ideal therapy to work with this population. Eating disorders cause a distinct separation between body and mind, as an individual views their body as something to control, rather than part of themselves. DMT reintegrates the connection between these two, as it offers more holistic healing. A person with an eating disorder needs a safe place where they can explore the underlying reasons for their disorder. This is not something that one can just think about consciously, but rather needs an intervention that goes beyond the surface symptoms. An individual with an ED will not easily rid themselves of what they see as

their only identity, but DMT gives individuals space to be vulnerable and explore the reasons why they are holding onto that identity and how to let go of it in a trusting environment.

While there has been extensive quantitative research done on the impact of CBT and other cognitive-based therapies with eating disorders, currently there is primarily qualitative research done on the use of DMT and eating disorders. Future research should not only show quantitative results on the impact of DMT with eating disorders, but also show results of the efficacy of DMT against cognitive-based therapies. This type of study would help in emphasizing the role that DMT should have in treating this population. Additionally, most of the current qualitative research on DMT with eating disorders is based on individual experiences with treatment. Future DMT research should expand the sample size to demonstrate the validity of this method of therapy with eating disorders.

Conclusion

Individuals with eating disorders need to give themselves permission to not have an eating disorder. It's important that they learn to let go of the control and safety they have in the eating disorder and, instead, find safety and trust in themselves. DMT not only helps them find new, healthy ways of coping with the change and improving their body image, but through frameworks such as the embodied identity development model, DMT can help replace the eating disorder void with a new identity. DMT gives them a voice to say no to their eating disorder, and for these reasons, DMT should not just be a supplementary therapy alongside CBT. Rather, because DMT explicitly works with the body to explore all levels of meaning of the eating disorder, and not just the superficial, cognitive-based levels, DMT should begin as the foremost method of therapy used in the treatment of the eating disorder population.

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Appendix A: Medical and Psychological Comorbidities

Medical Comorbidities

General complications in the gastrointestinal system, endocrine system, cardiovascular system (Rikani et al., 2013) as well as skeletal, musculoskeletal, neurological problems (Shapiro, 2012)

Anorexia Nervosa

- Low bone density
- Slower heart rate
- Low blood pressure
- Dehydration (Padrão & Coimbra, 2011)
- Dry skin
- Acrocyanosis
- Alopecia (Rikani et al., 2013)
- Anemia – causing fatigue and weakness (Padrão & Coimbra, 2011)
- Complications in reproductive system
    - Absence of menstrual cycle
    - Amenorrhea
- Delay in pubertal development (Shapiro, 2012)

Bulimia Nervosa

- Complications in hematological systems (Rikani et al., 2013)
- Delay in pubertal development (Shapiro, 2012)
- Erosion of dental enamel
- Enargement of parotid/salivary glands
- "Sears on the back of hand resulting from gag reflex" (Rikani et al., 2013)

Binge-Eating Disorder

- Hypertension
- Heart and kidney failure
- Obesity
- High cholesterol
- High blood pressure
- Type II Diabetes (Eating Recovery Center, n.d.)

Psychological Comorbidities

Depression: 51%
Anxiety: 71%

- Obsessive Compulsive Disorder (OCD)
- Generalized Anxiety Disorder (GAD)
- Social Phobia (Grilo & Mitchell, 2009)

Substance Use Disorders: 50%

Appendix B: Treatment and Care

Inpatient Hospitalization: Used with most severe cases – patients hospitalized to restore healthy weight, often involuntarily.

Day Patient: People attend treatment during the day and go home at night – designed for people transitioning out of inpatient care.

Outpatient Care: For people with more moderate symptoms – typically includes either individual or group therapy.

Group Therapy: Beneficial in the treatment of eating disorders because it alleviates the feelings of isolation and encourages interpersonal skills.

Family Therapy: Occurs when treating adolescents, typically including at least the parents and client. Includes parents taking full responsibility over client's meal plan (Shapiro, 2012).

Psychodynamic Therapy: "Focuses on bringing unconscious conflicts that underline the eating disorder to the surface" (Shapiro, 2012, p. 20).