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Dialectical Behavior Therapy as a Possible Treatment Modality for Schizophrenia

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Abstract

This paper evaluates the effectiveness of dialectical behavior therapy as an additional treatment modality for schizophrenia. Schizophrenia affects approximately 1% of the world's population and most of the individuals diagnosed with it never fully recover. Due to the severity of this disorder, it is important to discover effective treatment modalities that could aid in symptom management, such as dialectical behavior therapy. Some articles used in this review describe background information on schizophrenia and dialectical behavior therapy; the other articles describe primary research conducted using dialectical behavior therapy. This paper explains the symptoms and current treatment for schizophrenia. Likewise, dialectical behavior therapy is explained through its incorporation of the ideas of acceptance and change by using specific stages of treatment, modes of treatment, and skills training. Dialectical behavior therapy studies of an experimental or quasi-experimental nature are examined to evaluate its effectiveness on the following disorders: borderline personality disorder, substance abuse, suicidal ideation, eating disorders, attention-deficit hyperactivity disorder, depression, bipolar disorder, and antisocial personality disorder. Using the conclusions gathered from these studies, dialectical behavior therapy is proposed as a possible treatment option for those who suffer from schizophrenia.

Keywords: dialectical behavior therapy, treatment, schizophrenia

Dialectical Behavior Therapy as a Possible Treatment Modality for Schizophrenia

Schizophrenia is a debilitating disorder that is not fully understood. This disorder affects roughly 3.5 million people in the United States alone and 1.1% of the world's populations regardless of racial, ethnic, or economic background ("About Schizophrenia," n.d.). Yet it remains largely misunderstood by the general population. This disorder greatly impacts the lives of the people who struggle with it, as well as the families and friends of these individuals. These individuals suffer from various symptoms including hallucinations, delusions, and abnormal motor behavior (American Psychiatric Association, 2013). Roughly 75% of all diagnosed individuals never fully recover ("About Schizophrenia," n.d.). Currently, there is no known cause for schizophrenia and therefore no cure. Nevertheless, treatments and resources include medications and psychotherapy ("Schizophrenia Treatment," 2017). Medications reduce various physical symptoms of schizophrenia, but do not resolve problems related to lower functioning in the areas of work, interpersonal relationships, and self-care. Psychotherapy may help with these negative social and emotional effects of schizophrenia ("Schizophrenia Treatment," 2017).

One common psychotherapy is cognitive behavior therapy (CBT) which is used to treat various mental disorders and is geared towards managing symptoms and improving quality of life. This paper suggests looking at a specific type of CBT: dialectical behavior therapy (DBT). This treatment modality leads the patient through stages or steps that begin by addressing the more severe, life-threatening behaviors of a disorder in order to improve his or her overall quality of life. This treatment modality was created in the late 1980's through research on individuals with borderline personality disorder (Swales, 2009). Since that initial research, several other researchers have studied DBT as an effective treatment modality for many other disorders including borderline personality disorder (BPD) combined with substance abuse (Linehan et al., 1999), suicidal ideation (Pistorello, Fruzzetti, MacLane, Gallop, & Iverson, 2012), eating disorders (Telch, Agras,

& Linehan, 2001; Safer, Telch, & Agras, 2001), attention-deficit hyperactivity disorder (Hirvikoski et al., 2011; Fleming, McMahon, Moran, Peterson, & Dreessen, 2014), depression (Lynch et al., 2007; Neacsu, Eberle, Kramer, Wiesmann, & Linehan, 2014), bipolar disorder (Goldstein et al., 2015), and antisocial personality disorder (McCann et al., 2000). In these studies, DBT was modified from its original format to specifically apply to each disorder more succinctly. Schizophrenia shares common symptoms with these disorders. However, there is no published research regarding DBT as an effective treatment modality for schizophrenia. In this paper, I will discuss schizophrenia and its current treatments, the elements of DBT, research demonstrating effective use of DBT in various psychological disorders, and the possibility of DBT as a treatment modality for schizophrenia.

Methods

Search Protocol

Articles selected were identified through PsycINFO and Scopus. In the first round of searches, the keywords were *dialectical behavior therapy* and *schizophrenia*. This produced zero results. Consequently, the keywords *dialectical behavior therapy* and *disorder* elicited 758 articles. Subsequent searches used variations of *dialectical behavior therapy* and any variation of certain complementary disorders I was researching, such as *dialectical behavior therapy and attention-deficit hyperactivity disorder* or *DBT and ADHD*. Later searches also included the keyword *treatment* to further distinguish between articles. This search produced 124 articles. From these two searches, I chose the 19 articles used in this paper.

Criteria for Inclusion

There are two types of articles included in this paper: position articles and primary research. Position articles provide background information; they consist of literature reviews, meta-analyses, and other background sources. DBT position articles were excluded if they did not provide an adequate explanation detailing the history of DBT and significant research. Schizophrenia position articles

were excluded if they did not provide symptoms and current treatment options. For primary research, the articles needed to include experimental or quasi-experimental studies in order to demonstrate the effectiveness of DBT on various disorders. There were no exclusions based on participant age, gender, or number. Each article was chosen based on noteworthy research concerning a certain disorder and its connection to DBT. In total, I included seven position articles and 12 primary research articles.

Schizophrenia and Current Treatment

Schizophrenia surfaces in late adolescence or in early adulthood and occurs more frequently in men than women (“Schizophrenia Treatment,” 2017). Schizophrenia tends to involve abnormalities with hallucinations, delusions, disorganized thinking or speech, and disorganized or abnormal motor behavior (American Psychiatric Association, 2013). Positive symptoms of schizophrenia are hallucinations, delusions, disorganized thinking, and agitation. Negative symptoms include affective flattening, alogia, and avolition. These symptoms contribute to distress in individuals with schizophrenia and lead to impairments in life domains (“Schizophrenia Treatment,” 2017). These individuals can experience lower functioning in areas such as work, interpersonal relationships, or self-care. No known cause of schizophrenia has been discovered, though some genetic connections have been identified (“About Schizophrenia,” n.d.). Therefore, schizophrenia can only be treated or managed, not cured.

Schizophrenia is currently treated by medication that targets physical symptoms. Nonetheless, the medication does not solve the problems that arise with lower functioning in the areas of work, interpersonal relationships, and self-care. Individuals with schizophrenia need help to learn coping skills, effective social skills, and communication skills. These skills are taught in psychotherapy. Currently, there are several group-based treatment modalities including an evidenced-based-CBT that help individuals with schizophrenia manage symptoms and increase quality of life (Orfanos, Banks, & Priebe, 2015). A team-based research

approach has also demonstrated effectiveness with separate teams handling the medication, psychotherapy, case management, family support and education, and work support and education of the schizophrenia patient (“Schizophrenia Treatment,” 2017).

Schizophrenia is a spectrum disorder which means that those who suffer from it can demonstrate a range of symptoms. With the range of symptoms experienced, each individual diagnosed with schizophrenia can react differently to the current treatments available. Treatments involving psychotherapies have demonstrated their usefulness in aiding reduction of symptomology. However, different types of psychotherapies result in varying degrees of success where a majority, but not all patients demonstrate improvements (Ivezić et al., 2017). Since schizophrenia contains many debilitating symptoms, any form of medication and therapy that can aid in better functioning for these individuals is valuable to pursue. Because some individuals may not respond well to current treatments, it would be advantageous to find another treatment modality that is effective for managing the symptoms of schizophrenia and providing an opportunity for a better quality of life.

Dialectical Behavior Therapy

As mentioned, DBT is a type of CBT that is built upon three foundations: behavioral science, Zen, and dialectics (Neacsiu, Ward-Ciesielski, & Linehan, 2012). Marsha M. Linehan, the creator of DBT, originally attempted to adapt behavioral therapy to clients experiencing borderline personality disorder. In therapy, she incorporated strategies of change to help the clients improve. Yet, she noticed that the clients had several difficulties with the treatment, including not performing agreed-upon homework assignments and not returning for appointments (Swales, 2009). Linehan hypothesized that her clients behaved in this manner because they felt the change-centered treatment was invalidating because clients felt they were unable to change. In other words, the treatment was ineffective due to a lack of client acceptance

Acceptance is emphasized in Zen philosophy, based on a type of Buddhism. Zen followers are encouraged to release ideas of what they believe reality should be like and find acceptance, self-validation, and tolerance (Neacsiu et al., 2012). Thus, the practice of acceptance emphasizes focusing on the current moment, acknowledging reality, and accepting reality. Clients are encouraged to accept themselves as they are and tolerate the difficult experiences they are undergoing. Because change and acceptance are opposing philosophies, a dialectical approach is needed.

A dialectical worldview creates an emphasis on the whole and describes the whole as complex, inter-related, and composed of opposites (Swales, 2009). It is important to synthesize these opposites. The dialectical approach ascribes a balance between the acceptance needed to allow hope in the ability to change, and the change necessary to improve a given situation. The therapist must balance with the client, pushing for acceptance or change when necessary. Consequently, the clients see how the systems in themselves interact and how they in turn interact with their environments.

Stages of Treatment

DBT utilizes four stages of treatment. These stages are defined by the severity of the client's behavior. The therapist works with the client to achieve goals in each stage to progress towards the life the client wants (Neacsiu et al., 2012; Swales, 2009). In Stage I, the client is demonstrating out-of-control behavior, such as life-threatening behaviors, therapy-interfering behaviors, and severe quality-of-life-interfering behaviors. The goal of Stage I is for the client to control severely dysfunctional actions. In Stage II, the client controls those behaviors, but suffers from the inability to experience emotion, perhaps due to past trauma or invalidation. The goal of Stage II is for the client to experience emotions without experiencing trauma. In Stage III, the client synthesizes the previous stages and overcomes quality-of-life-interfering behaviors (such as low mood in depressed patients) through developing self-respect,

defining goals, and raising feelings of peace and happiness. The goal of Stage III is for the client to lead a life of ordinary joy and sadness. In Stage IV, the client focuses on resolving a feeling of incompleteness. The goal of Stage IV is for the client to move from a sense of incompleteness to a life of ongoing experiences. The client may enter treatment at any stage and move forward or backward through the stages.

Modes of Treatment

In its complete form, DBT contains four modes of treatment: skills training group, individual therapy, phone coaching, and the therapist consultation team (Neacsiu et al., 2012; Swales, 2009). The skills training group focuses on enhancing the clients' capabilities by teaching them behavioral skills. Individual therapy focuses on enhancing client motivation through helping the clients apply the skills taught to specific events and circumstances. Phone coaching is how the therapist provides in-the-moment consultation to help with relevant situations. The therapist consultation team is intended to provide support for the therapists and group leaders. This team helps to keep the treatment providers motivated and competent to perform DBT.

Skills Taught in DBT

Through these modes of treatment, DBT teaches four skills: mindfulness, distress tolerance, interpersonal effectiveness, and emotion regulation (Neacsiu et al., 2012; Swales, 2009). Mindfulness is the practice of being fully aware in the moment and observing the situation in a non-judgmental fashion. Distress tolerance teaches impulse control and self-soothing techniques while learning to tolerate discomfort in difficult situations. Interpersonal effectiveness teaches the clients to be assertive while maintaining relationships and self-respect. Emotion regulation teaches strategies for changing unwanted emotions. A standard DBT treatment program uses all of the modes of treatment and the various DBT stages and skills needed for the particular client.

DBT Research

Originally, DBT was created by Marsha M. Linehan to treat adult women with borderline personality disorder (BPD) and histories of chronic suicidal behavior (Swales, 2009). Linehan, Armstrong, Suarez, Allmon, and Heard (1991) conducted the first randomized clinical trial to evaluate the effectiveness of DBT with chronically parasuicidal women who met the criteria for BPD. BPD is characterized by an impairment in self and interpersonal functioning, negative affectivity, disinhibition, and antagonism (American Psychiatric Association, 2013). Parasuicidal behavior, or intentional self-injuring behavior, is common in individuals with BPD (Linehan et al., 1991). The participants in this study were women between the ages of 18 and 45 years old who had been diagnosed with BPD and demonstrated two parasuicidal episodes in the last five years with one in the last eight weeks. There were two groups: a standard DBT treatment group and a treatment-as-usual (TAU) group. The treatment lasted for one year with assessments every four months. Linehan and her colleagues found that the participants who received DBT had fewer parasuicidal events with less medically severe parasuicidal injuries, were more likely to stay in individual therapy, and experienced fewer inpatient psychiatric days than the participants in the TAU group.

DBT continues to be utilized in treating BPD and researchers have continued to study the effectiveness of DBT. Linehan et al. (2006) conducted a more rigorous study than previous trials. These participants were also women between the ages of 18 and 45 years old who were diagnosed with BPD and demonstrated two parasuicidal episodes in the last five years with one in the last eight weeks. In this trial, however, the participants were separated into two different groups: a standard DBT group and a community treatment by experts group (CTBE). The treatment lasted a year, with regular assessments. At the follow-up a year later, those in the DBT treatment group were less likely to attempt suicide, had less hospitalization for suicidal ideation, and had a lower medical risk than the CTBE group. The individuals in the DBT group were also less likely to leave treatment and had fewer psychiatric

hospitalizations and psychiatric emergency visits. These studies demonstrate the effectiveness of DBT on regular or community treatments which provide optimistic proposals for its use with other disorders. Since this time, further research has been conducted on DBT in relation to its effectiveness in treating other disorders. If DBT can be a more effective treatment for other disorders, there is the possibility it could have the same results with schizophrenia, which shares similar symptomology with other disorders. The following studies demonstrate the efficacy of DBT as a treatment modality for various disorders.

Borderline Personality Disorder with Substance Abuse and Suicidal Ideation

Several studies furthered this research by testing DBT on individuals with BPD and another predominant disorder, such as substance abuse. Individuals with BPD are more likely to experience substance abuse and have higher rates of psychiatric problems compared to those who have a substance abuse problem with no personality disorder (Linehan et al., 1999). DBT treatment can be modified to help target these issues by including skills such as mindfulness. Linehan et al. (1999) executed a study to see how effective DBT is on people with BPD and substance abuse. These researchers used a randomized controlled trial with the participants divided among a standard DBT treatment group, with small alterations to focus on the substance abuse, and a treatment as usual (TAU) group, where previous or standard substance abuse guidance was given. At the six-month follow-up, Linehan et al. (1999) concluded that DBT was superior to TAU in reduction of substance abuse, completion of treatment, and improvements in social and global adjustment. This study demonstrates the efficacy of applying DBT to other disorders such as substance abuse and suggests that DBT could be effective if expanded from its original form of BPD treatment to target other disorders.

Moreover, DBT has also been used to treat suicidal ideation that can come as a result of BPD. People who are suicidal often experience a suicide attempt (SA) or non-suicidal self-injury

(NSSI; Pistorello et al., 2012). Pistorello et al. (2012) performed a randomized controlled trial comparing the effectiveness of DBT to an optimized TAU. They focused on a population that had not been researched previously—college aged males and females who normally show higher levels of suicidal ideation. To qualify for the study, each participant had to be suicidal at baseline, have at least one SA or NSSI, and meet at least three BPD diagnostic criteria. The participants were split into two groups: a slightly altered DBT treatment group and a TAU group. Both treatments lasted 7-12 months and participants had regular assessments throughout the treatment. After the six-month follow-up assessment, Pistorello et al. (2012) concluded that the clients participating in DBT showed greater decreases in suicidality, depression, number of NSSI events (if applicable), BPD criteria, psychotropic medication use, and significantly greater improvements in social adjustment than the optimized TAU. Through the adaption of DBT to target specific symptoms, these patients were aided in achieving a better quality of life. Schizophrenics who also demonstrate emotional dysregulation and a problem with self and interpersonal functioning could likewise achieve a greater quality of life.

Eating Disorders

Additionally, DBT has been found useful in the treatment of eating disorders, such as bulimia nervosa and binge eating disorders. People with eating disorders are characterized by a low energy intake, fear of gaining weight or being fat, and disturbance in the way body weight or shape is experienced (American Psychiatric Association, 2013). Eating disorders are associated with negative affect; thus, people experiencing these eating disorders are thought to have trouble regulating their emotions (Safer et al., 2001; Telch et al., 2001). The DBT skills of mindfulness, emotion regulation, and distress tolerance specifically target the symptoms or causes of eating disorders.

Telch et al. (2001) and Safer et al. (2001) conducted separate randomized controlled trials that evaluated DBT as a treatment for eating disorders. Telch et al. (2001) tested women with a binge

eating disorder (BED) in a 20-week DBT skills group (N=44). Half of the women were placed in the treatment group and the other half were put on a waitlist. After the initial treatment was finished, 89% of the treatment group were abstinent (no binge episode for four weeks) compared to the 12.5% of the control group. After the six-month follow-up, 56% remained abstinent. Safer et al. (2001) reported similar findings with a 20-week DBT skills group trial concerning women who previously experienced at least one binge or purge episode per week (N=31). They found that 28.6% of the participants in DBT were abstinent compared to zero participants from the control group and an additional 35.7% of the DBT participants reduced their episodes by 88%. Each study modified the DBT treatment to train skills needed to cope with an eating disorder, such as emotion regulation. Both studies used relatively small sample sizes, and DBT was compared to no treatment whatsoever, which could overstate the results from these studies. Yet, modified DBT demonstrated a positive effect on individuals with eating disorders through the skills training.

Attention-deficit Hyperactivity Disorder

DBT has also been modified to successfully help those with attention-deficit hyperactivity disorder (ADHD). ADHD is a pattern of inattention and/or hyperactivity/impulsivity that restricts development or functioning in several settings and negatively influences occupational or social functioning (American Psychiatric Association, 2013). In certain situations, known treatments for ADHD, such as medication, do not effectively work for some individuals (Fleming et al., 2014; Hirvikoski et al., 2011). Hirvikoski et al. (2011) tested the feasibility, acceptability, and efficacy of DBT on individuals with ADHD. Their randomized controlled study compared a 14-week DBT skills group and a semi-structured discussion group. They found a significant reduction in ADHD symptoms in the DBT group, but not in the control group. Similarly, Fleming et al. (2014) also tested the feasibility, acceptability, and efficacy of DBT on individuals with ADHD; however, their study had a narrower focus on college students with an 8-week DBT skills

group and a control group given self-help handouts. Nevertheless, Fleming et al. (2014) reported the DBT group as having a greater treatment response rate, clinical recovery rate on ADHD symptoms and executive functioning, and amelioration on quality of life. Both studies demonstrated key improvements in positive skills and reductions in ADHD symptoms that point towards the use of DBT being effective in this treatment area.

Depression and High Emotion Dysregulation

DBT was also adapted to treat depression and high emotion dysregulation. Depressive disorders are usually characterized by a sad, empty mood with physical and cognitive changes that affect the person's ability to function (American Psychiatric Association, 2013). The treatments for depression are usually medication, psychotherapy, and various improvements to physical health. Mindfulness, emotion regulation, distress tolerance, and interpersonal effectiveness in DBT target the emotional symptoms related to personal functioning. Lynch et al. (2007) conducted two randomly controlled studies to determine the efficacy of implementing DBT to treat individuals with a personality disorder and co-morbid depression. The first study was a pilot study to determine the feasibility of utilizing both DBT and medication in older adults (age 60+) with depression. Lynch et al. (2007) separated 34 depressed adults into a group receiving standard DBT therapy with medication or a group receiving medication alone. The study lasted 28 weeks and resulted in higher rates of remission for the participants in the DBT and medication group versus the medication alone group.

The next study demonstrated similar findings. For this study, participants (age 55+) qualified if they had major depressive disorder and a personality disorder. The researchers separated the participants into two groups: a DBT and medication group and a medication alone group. The DBT treatment was comprehensive, lasted six months, and adapted for behaviors related to depression and coping. After the follow-up, the DBT and medication group achieved remission from major depressive disorder faster than the

medication group, while maintaining higher gains in interpersonal sensitivity and interpersonal aggression. These studies exhibited a narrow, specific population, yet they demonstrate that DBT can be adapted to aid in depressive disorders. These studies also suggest that DBT in addition to medication may be more effective than medication alone in treating certain disorders. DBT could be adapted and used in combined treatments to further the effectiveness of a treatment program.

Similarly, Neacsiu et al. (2014) conducted a randomized control trial that specifically targeted a symptom of several disorders: high emotion dysregulation, or the inability to control or regulate emotions. This symptom can be found in many mood and anxiety disorders (Neacsiu et al., 2014). In early studies, it was established that DBT could help individuals with BPD in regulating their emotions because emotion regulation is a specific DBT skill (Swales, 2009). Neacsiu et al. (2014) expanded this idea to emotion dysregulation in general. The participants in this study were men and women, over the age of 18, with high emotion dysregulation and one current depressive or anxiety disorder. The researchers assigned the participants to a DBT group or an activity-based support group (ASG). After the 16-week program and six-month follow-up, Neacsiu et al. (2014) concluded that DBT was superior to ASG in reducing emotion dysregulation. Likewise, DBT showed a quicker treatment response and faster reduction of anxiety; however, DBT and ASG were similar in reducing depression. This study suggests that DBT can be applied not only to a specific disorder, but also to relative symptoms of various disorders.

Bipolar Disorders

Likewise, bipolar disorders has been responsive to an altered form of DBT. Bipolar disorders are characterized by mood swings of high energy and feelings of sadness (American Psychiatric Association, 2013). Again, emotion dysregulation plays a key role in bipolar disorder and DBT helps target these symptoms through skills teaching. Goldstein et al. (2015) conducted a randomized controlled pilot study to determine if DBT could indeed be

beneficial for those with bipolar disorder. The participants consisted of 20 young women and young men between the ages of 12 and 18. The researchers established a DBT group and a psychosocial TAU, with both groups receiving medication. The treatment involved one year of comprehensive DBT with tapered treatments sessions after six months. After the 12-month follow-up, DBT was better at reducing depressive symptoms and suicidal ideation. Also, DBT significantly reduced mania symptoms and emotion dysregulation and TAU did not. Though this study involved a small number of participants, it encourages the idea that DBT can be adapted to more severe disorders, such as bipolar disorder. DBT assisted in the reduction of various symptoms of this disorder, potentially affecting the participants' quality of life.

Antisocial Personality Disorder

Furthermore, DBT has been used to treat antisocial personality disorder. Antisocial personality disorder (ASPD) is characterized by impairments in self-functioning, such as identity and self-direction, and impairments in interpersonal functioning, such as empathy and intimacy (American Psychiatric Association, 2013). The DBT skills of mindfulness and interpersonal effectiveness could be used to help these symptoms in ASPD. For example, McCann et al. (2000) performed a quasi-experimental study comparing DBT and TAU (characterized by individualized supportive care) over a 20-month period. This study is quite different than the previous studies because it does not involve the general population of outpatients. The patients in this study were forensic inpatients, primarily male, most had committed violent crimes, 50% had BPD, and 50% had ASPD. Researchers used DBT individual therapy, group skills, and skills coaching in a modified version to target the needs of these patients. In comparison to the TAU group, the DBT group had a significant decrease in depressed and hostile mood, paranoia, and psychotic behaviors. DBT also showed a decrease in maladaptive interpersonal coping skills and an increase in adaptive interpersonal coping skills. This study suggests that DBT can be an effective treatment modality in disorders that purport

life-threatening behaviors. A DBT treatment program helps the individual to modifying critically dangerous behaviors and teaches skills that can improve quality of life. Perhaps DBT can be adapted to treat the severe symptoms of schizophrenia such as hallucinations, delusions, disorganized thinking, and agitation. These symptoms could be addressed in the same fashion as this study with individual therapy, group skills, and skills coaching, which could hopefully lead to similar decreases in depressed and hostile mood, paranoia, and psychotic behaviors.

Synthesis

Through this research, we can see that DBT has been altered in many ways from its original form to target the needs of various disorders. Researches have added a substance abuse component to treatment for BPD with substance abuse (Linehan et al., 1999), specific skills in DBT necessary to cope with eating disorders (Safer et al., 2001), and medication in the DBT treatment for depression (Lynch et al., 2007). With each additional disorder a focus was created to specifically target that disorder's symptoms. Each of the disorders previously discussed range from moderate to severe. Though they do not have a cure, each disorder responded well to a DBT treatment plan that was targeted to treat its specific symptoms. The skills treatment seemed effective in helping participants learn how to better handle their symptoms to lead to a more functional life style. Collectively, these disorders contain some of the same symptoms and effects of schizophrenia, specifically emotion dysregulation, impulsivity, maladaptive interpersonal coping skills, and impairments of self and social functioning.

Discussion

Schizophrenia shares many of the same symptoms as the disorders previously mentioned. Each of these studies contained an altered form of DBT that focused on the symptoms of that specific disorder. DBT could similarly be altered to manage the symptoms of schizophrenia and increase the quality of life of those who suffer from it. Individuals with schizophrenia could benefit

from learning the DBT skills of mindfulness, distress tolerance, interpersonal effectiveness, and emotion regulation. Similar to those individuals with BPD (Linehan et al., 1999), mindfulness could help individuals with schizophrenia focus on the current moment in a non-judgmental fashion. This skill could help in moments when they are experiencing hallucinations and delusions. They can be taught to focus on reality and live in the moment. Distress tolerance might help these individuals learn impulse control and how to self-soothe during painful situations, similar to the studies on ADHD (Fleming et al., 2014; Hirvikoski et al., 2011) and ASPD (McCann et al., 2000). Interpersonal effectiveness could teach schizophrenics to better interact with others. In addition, emotion regulation would help those with schizophrenia change their unwanted emotions to improve their outlook on life, like those with BPD (Linehan et al., 1999), suicidal ideation (Pistorello et al., 2012), eating disorders (Telch et al., 2001), ADHD (Fleming et al., 2014; Hirvikoski et al., 2011), depression (Lynch et al., 2007; Neacsiu et al., 2014), and bipolar disorder (Goldstein et al., 2015). A DBT treatment plan may focus those with schizophrenia on the life-threatening behaviors at first. These individuals could use medication in collaboration with the psychotherapy. As therapy progressed, the therapist would guide the client through the DBT stages to teach the clients how to improve their quality of life. Future research should be performed to study DBT as an effective treatment modality for schizophrenia.

Limitations

However, there are some limitations with this analysis. There is a large amount of research currently being undertaken to study the efficacy of DBT as a treatment modality for several disorders. It is possible that there is current research being conducted studying DBT as a possible treatment for schizophrenia. Any results from studies not currently published would influence the conclusions of this analysis. Likewise, there may be additional research that contains more information on DBT in other databases or languages other than English. Also, finding participants for this kind of research could prove difficult due to the range of which

schizophrenia is experienced. Schizophrenia has been a difficult mental illness to treat, so this disorder may not react the same way to DBT as other disorders have.

Conclusion

It appears that DBT could be a possible treatment modality for schizophrenia. Several studies have supported the efficacy of DBT. In the future, it may be necessary to address larger populations to test DBT in a more effective manner. Continued research on the efficacy of DBT in general will support the idea of DBT as a beneficial treatment modality. After this, studies can be conducted using DBT as a treatment for schizophrenia. This type of research could help future therapists more effectively aid their clients in learning the skills necessary to improve self and interpersonal functioning. If DBT is an effective treatment modality for schizophrenia, individuals with schizophrenia could experience an increase in management of their symptoms and receive an increase in quality of life.

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