DIALECTICAL BEHAVIOR THERAPY (DBT):

BUILDING BRIDGES IN PUBLIC and GLOBAL MENTAL HEALTH

by

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A paper presented to the faculty of The University of North Carolina at

Chapel Hill in partial fulfillment of the requirements for the

degree of Master of Public Health

in the Department of Maternal and Child Health.

Chapel Hill, N.C.

April 18, 2011

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Background

Dialectical Behavior Therapy (DBT) was developed by Marsha Linehan and colleagues in the early 1990's for the treatment of Borderline Personality Disorder (BPD). Many adaptations of DBT have since been developed and the utility of DBT has been applied to many mental health problems, including eating disorders, depression, oppositional-defiant disorder, PTSD, and comorbidities of related disorders.

Aims

The aims of this paper are to provide a detailed overview of DBT, to elucidate the growing body of research utilizing DBT for myriad mental health problems, and to thus encourage the further research and use of DBT in public and global mental health settings.

Method

A PubMed and PsychInfo online database search was undertaken, in order to locate articles regarding DBT applications within the last 10 years. Article exclusion criteria included publication of more than 10 years ago (prior to 2001) and an *n* of less than 15. Since the majority of DBT research thus far has been in individuals meeting criteria for BPD, special attention was paid to articles addressing other mental health diagnoses, settings, and family outcomes.

Results

Following a description of public and global mental health, a detailed overview of DBT is provided. A literature review of twelve key articles follows, as related to diagnosis, setting, or family outcome. These articles were published from 2001 to 2011 and address diagnoses such as BPD, BPD comorbid with Eating Disorders (EDs), Binge Eating Disorder (BED), Oppositional-Defiant Disorder (ODD), and Posttraumatic Stress Disorder (PTSD) related to childhood sexual abuse. Other articles also address DBT use in correctional settings and in family outcomes. This paper reviews articles published from the United States, Germany, Australia, and the Netherlands (see Appendix A).

Conclusions

Due to its sustained efficacy with various groups, its high treatment retention, its potential for cost-effectiveness, ease in training providers, and transportability, DBT shows great promise as an intervention in the fields of public and global mental health.

INTRODUCTION

A variation of Cognitive Behavior Therapy (CBT), Dialectical Behavior Therapy (DBT) incorporates both Western-minded and Eastern-minded philosophies into a single skill set and general approach toward life. The word "dialectical" reflects DBT's concurrent focus on both validation of self and acceptance of change ("both/and" instead of "either/or") in individual functioning.[1] Two of the primary goals of DBT, as stated in a 2003 article by Verheul et al., are treatment retention and addressing high-risk behaviors, including suicidal and self-mutilating/-damaging behaviors.[1] As a skill set, DBT is taught from the perspective that maladaptive behaviors are just that – behaviors that can be changed, relearned to be more adaptive. This results in focused self-care and self-validation. The chief purposes of this paper are twofold: (1) to provide a detailed overview of DBT, and (2) to inform the public health community as to the possible utility of DBT in public health practice by illuminating several key articles, thus encouraging further research and use of DBT in public and global mental health settings.

Public mental health and global mental health are relatively new fields, still being refined. Public mental health can be described as the integration of the fields of public health and mental health - public health prevention and promotion integrated with mental health and substance abuse treatment modalities – in order to promote mental health and prevent and treat mental illness, for the overall health and well-being of a population. Global mental health can be viewed as the extension of public mental health on a global scale, with emphasis on improvement of services for people with mental disorders worldwide, evidence-based practices, and human rights (for more information, see www.globalmentalhealth.org).[2]

As literature within the fields of public mental health and global mental health grows, the base of research regarding DBT has also grown. In the past 10 years, DBT has been increasingly investigated throughout the world, thus having been applied to populations in a number of different cultures and economic and political climates. An additional aim of this paper includes elucidation of DBT's high treatment retention, potential for cost-effectiveness, ease in training providers, and transportability, providing support for the sustained efficacy of DBT across many outcomes and under many different circumstances.

DBT in Public Mental Health and Global Mental Health

Although DBT is an individual and small group treatment modality, it can easily be incorporated into pre-existing care frameworks and thus its benefits could be far-reaching. In the United States (re: public mental health), the Maternal and Child Health (MCH) service pyramid includes infrastructure building services, population-based services, enabling services, and direct health care or gap-filling services (see Appendix B).[3] DBT could be incorporated as an enabling service such as education or family support services, or as a direct health care and gap-filling service.[3]

Similarly, in *"Integrating mental health into primary care: A global perspective"* (re: global mental health), a World Health Organization (WHO) and World Organization of Family Doctors (Wonca) publication, the authors introduce the WHO service organization pyramid (see Appendix C). The pyramid depicts an optimal mix of services for mental health, in which "self-care" is listed as part of the informal services at the base. Self-care is represented as a high frequency but low cost need, and is also reflected along the side of the pyramid, indicating that individuals should utilize self-care techniques throughout the duration of their mental health

and psychiatric services.[4] Since DBT focuses highly on self-care and self-validation, it might play a role within these sections of the WHO service organization pyramid for an optimal mix of services for mental health.

DBT: A DETAILED OVERVIEW

DBT is taught from a skills training manual and is formatted after the classroom environment.[5] Individuals usually meet with both a DBT group (a.k.a. "skills training") and individually with a DBT-trained or other personal therapist.[1] There are homework assignments each week for the group session and participants have the option to keep a DBT diary card each week for the individual sessions.[5] In order to facilitate the dynamics of a DBT group, there are 9 strict guidelines for skills training that include restrictions on the types of relationships individuals in group can have with each other, as well as address issues of attendance and confidentiality.[5] There may also be additional or specialized rules per group.

The overarching goal of skills training is to learn skills that will aid the individual in emotion regulation and in behavioral and cognitive changes associated with problems in living.[5] Specific goals for skills training include decreasing difficulties in interpersonal relationships and lifestyle chaos; decreasing labile emotions, moods, and impulsivity; and decreasing confusion regarding self.[5] Adaptive behaviors targeted include core mindfulness skills, interpersonal effectiveness skills, emotion regulation skills, and distress tolerance skills - these are presented as four core DBT modules.[5]

MINDFULNESS

Based in Eastern philosophies, mindfulness skills focus on empowering DBT participants to be in control of their minds by integrating "reasonable mind", "emotional mind", and "body

mind" when making decisions.[5] Conceptualized as a venn diagram, these three types of

mindfulness, all essential to decision-making, intersect to form "wise mind" (See Appendix D).[5]

Learning to make decisions using wise mind (i.e., instead of using solely impulse, emotion, or

physiological response) is an ultimate goal of DBT skills training.[5] Wise mind is introduced early

in DBT, so that participants can practice using this new mode of decision-making throughout

skills training.[5]

Mindfulness Activities

Mindfulness activities are incorporated into group DBT sessions, typically including a

mindfulness exercise at the beginning of each group session. An example of such a mindfulness

task might be a specialized and instructed breathing exercise.

"What" & "How" Skills

In order to teach participants how to be mindful, the mindfulness module focuses on

"what" and "how" skills.[5] The "what" skills are: (1) *observe*, (2) *describe*, and (3) *participate*.[5] In

order to master *observe* skills, skills training encourages individuals to use their five senses and

just notice the experience they are having.[5] An analogy for the experience of observing one's

own experience is to have a "teflon mind" – allow thoughts and feelings to come into one's

mind and then immediately leave.[5] Using the *describe* skill, participants place words on their

experiences, such as "Loneliness is visiting me…"[5] Similarly, participants put their experiences

into words by using "just the facts" to describe an event and/or put a name on a particular

feeling.[5] The third "what" skill, *participate*, teaches group members to become one with their

experiences, forgetting themselves in a way that they can fully participate.[5] "Participate"

encourages participants to practice altering situations that may be harmful, altering potentially harmful reactions to those situations, and accepting self and situation as is.[5]

The "how" skills of mindfulness include (1) *non-judgmentally*, (2) *one-mindfully*, and (3) *effectively*.[5] The "how" skills are different than the "what" skills, in that they are meant to be used all together, all at once. For instance, individuals can often be very judgmental about oneself, experiences, and other people. Being non-judgmental teaches participants to make experiences less personal, focusing on the consequences of the thing or behavior, versus evaluations about the thing or the person who is behaving in a particular way.[5] Being one-mindful allows the individual to be in the moment and do one thing at a time, concentrating one's mind.[5] Being effective allows the participant to focus on what works and keep an eye on one's objectives.[5] When utilized all at once, the "how" skills allow individuals to get what they need and want from a situation, a goal that they may have previously reached by using more maladaptive means.

INTERPERSONAL EFFECTIVENESS

In this module of skills training, participants are encouraged to care for relationships, balance priorities vs. demands, balance "wants" to "shoulds", and build mastery and self-respect.[5] Three types of interpersonal effectiveness are emphasized: (1) objectives effectiveness – obtaining goals or objectives in certain circumstances, (2) relationship effectiveness – obtaining and maintaining good relationships, and (3) self-respect effectiveness – obtaining and improving respect and admiration for self.[5] Within objectives effectiveness, participants focus on learning their rights, delegating responsibilities, or resolving interpersonal tension and/or disputes.[5] Within relationship effectiveness, participants may focus on how to

balance short-term goals with long-term goals of a relationship.[5] Within self-respect

effectiveness, participants may focus on respecting their own values and beliefs, and behaving

in ways that make them feel competent and successful.[5]

DBT teaches individuals that there are many factors which can reduce interpersonal

effectiveness. These include lack of skill, worries ("worry thoughts"), emotions, indecision, and

environment.[5] Worksheet handouts are used during DBT group sessions and as homework

assignments. These handouts challenge myths about interpersonal effectiveness, provide

"cheerleading statements" and factors to consider in deciding how/when to ask for something

one wants or needs, and provide suggestions for practicing interpersonal effectiveness.[5]

Specific Interpersonal Effectiveness Skills

Other skills taught in the interpersonal effectiveness module include DEAR MAN, GIVE,

and FAST.[5] The acronym DEAR MAN stands for: describe, express, assert, reinforce, (stay)

mindful, appear confident, and negotiate.[5] The acronym GIVE is short for: (be) gentle, (act)

interested, validate, and (use an) easy manner.[5] The acronym FAST stands for: (be) fair, (no)

apologies, stick to values, and (be) truthful.[5] Homework worksheets and other handouts

reinforce these and previous skills, as well as individual participant goals for interpersonal

effectiveness.[5] They remind participants that interpersonal effectiveness skills can only be

learned if practiced often.

EMOTION REGULATION

The primary goal of learning emotion regulation in skills training is to teach individuals

how to live with their emotions. Participants can learn how to live with their emotions by

having insight into the emotions that occur in their lives, minimizing the emotional

susceptibility that they experience, and reducing their emotional distress.[5] These goals are accomplished in a number of ways. Having insight into emotions is accomplished by identifying (observing and describing) the emotion and by comprehending what role an emotion plays in a particular situation.[5] Reducing emotional susceptibility is accomplished by decreasing exposure to emotion mind (negative vulnerability) while increasing positive emotions.[5] Decreasing emotional suffering is accomplished by letting go of painful emotions (through mindfulness) and actually altering negative emotions via a skill called "opposite action" (explained further on pg. 12).[5]

Worksheet handouts challenge myths about emotions and model the way in which emotions occur in real time.[5] Other worksheets offer participants ways in which to describe their emotions by focusing on the prompting events for feeling an emotion, interpretations that prompt the feeling, the experience of the emotion, the expression or acting on an emotion, and the aftereffects of an emotion.[5]

Understanding Emotions

The first objective of emotion regulation skills training is to understand the emotions that one experiences.[5] One way in which participants are taught to understand emotions includes identification of the emotion itself and identification of the role that an emotion plays in a particular situation.[5] Although there are approximately eight basic emotions that are part of the human experience, there are numerous names for emotions, given the culture. For example, in English, "happy" could also be substituted with the words "joy" and "blissful". Labeling emotions is sometimes a difficult task for individuals with mental health problems. For example, an individual could be feeling more than one emotion at a time or a primary and a

secondary emotion. (The primary emotion is the first emotion that was elicited by a situation or event, while the secondary emotion is an emotion resulting from having the primary emotion.) Nevertheless, emotions have three primary functions, according to DBT: (1) to impart knowledge to and affect others in some way, (2) to stimulate them towards action, and (3) to self-validate.[5] Emphasis is placed on the fact that emotions are transient and one does not have to claim an emotion for his/her entire existence, such as in the example of using the phrase "I am feeling sad" versus "I am sad".[5] Focus is also placed on self-validation: because an individual experiences an emotion, that experience alone makes it valid.[5]

Reducing Emotional Vulnerability

The second goal of emotion regulation training is to reduce emotional vulnerability.[5] Participants are taught to limit susceptibility to negative emotions and to avoid emotion mind with the acronym PLEASE MASTER.[5] The "PL" stands for treating physical (and mental) illness, the "E" for balanced eating and diet, the "A" for avoiding mood-altering drugs, the "S" for getting balanced sleep, the "E" for getting exercise, and the "MASTER" for building mastery – doing one thing per day that makes oneself feel able and in charge.[5]

Increasing Positive Emotions

Participants are taught to increase positive emotions by doing short and long term things that increase the number of positive events in one's life - being mindful of positive experiences, and unmindful of worries.[5] In order to build positive experiences in the short term, individuals can do one thing per day from the Adult Pleasant Events Schedule, which could include walking, playing cards, or listening to music.[5] In the long term, individuals can accumulate positive experiences, in order to create a "life worth living".[5] This could include

caring for relationships or planning for their career.[5] Being mindful of positive experiences

means focusing attention on positive events as they happen and refocusing attention when the

mind wanders to the negative or worries.[5] An example of being unmindful of worries includes

not thinking about when the pleasant experience will end.

Decreasing Emotional Suffering

The third and final objective of emotion regulation skills training is to decrease

emotional suffering.[5] Participants are taught how to do this by letting go of painful emotions,

which is accomplished by being mindful of their current emotion.[5] In a conversation with M.

Golden, Psy.D. (March 2011), a local DBT provider, mindfulness was defined as "present-

moment awareness without judgment". Using mindfulness, individuals are encouraged to

observe and experience their emotion, remember that they are not defined by their emotion,

and to practice loving and wholeheartedly accepting their emotion.[5] Another way in which

participants are taught to decrease emotional suffering includes the use of "opposite action",

which is simply acting opposite to the current emotion.[5] According to personal communication

with M. Golden, Psy.D. (March 2011), this skill is based on the idea that there is an action urge

for every emotion. For example, one opposite action of fear is to repeatedly do what you are

afraid of doing.[5] For sadness or depression, an opposite action is to be active and approach,

not avoid, situations.[5] For anger, opposite action might include doing something nice or being

empathetic instead of acting on that anger.[5] Emotion regulation homework worksheets include

those related to observing and describing emotions and keeping an emotion diary.[5]

DISTRESS TOLERANCE

The distress tolerance module of DBT skills training first focuses on three reasons why it is important to cope with pain: (1) pain is a natural component of life and usually cannot be avoided, (2) a person may act impulsively if they cannot cope with their pain, and (3) when acting impulsively, a person may hurt him/herself or not get what h/she wants (or needs) from a situation.[5] This module specifically teaches participants crisis survival skills – skills for coping with painful emotions and events when things will not improve *right away.* [5]

Crisis Survival Skills

The four crisis survival skills taught by DBT are distraction, self-soothe, improving the moment, and weighing the pros and cons.[5] With the first crisis survival skill, distracting with "wise mind ACCEPTS", the individual uses <u>a</u>ctivities to distract, <u>c</u>ontributes to what is going on around him/her, uses <u>c</u>omparisons to compare his/her situation with another's situation, uses opposite <u>e</u>motions, <u>p</u>ushes away emotions that he/she cannot spend energy on, and practices noticing <u>t</u>houghts and <u>s</u>ensations.[5]

The second crisis survival strategy, self-soothe, includes using the five senses to focus attention and distract.[5] Self-soothe techniques for vision could include reading, self-soothe techniques for hearing could include listening to soft music, self-soothe techniques for smell could include going outside to smell some flowers, self-soothe for taste could include treating oneself to a dessert, and self-soothe for touch could include using velvety lotion.[5]

In the third crisis survival strategy, IMPROVE the moment, participants are encouraged to improve the moment with <u>i</u>magery, with <u>m</u>eaning, with <u>p</u>rayer, with <u>r</u>elaxation, with <u>o</u>ne thing in the moment, with a brief <u>v</u>acation, and with <u>e</u>ncouragement.[5]

The fourth and final crisis survival technique, weighing pros and cons, includes making a list of pros and cons for both tolerating and not tolerating the distress.[5] This is a common decision-making tool; however, it is especially important to utilize during moments of crisis, such as during times of suicidal ideation. Distress tolerance skills are specifically for periods of crisis; however, other DBT skills are practiced daily, as needed, by individuals in DBT skills training.

DBT: A LITERATURE REVIEW

In this section, the efficaciousness of DBT will be examined. Afterwards, the sustained efficacy of DBT, its treatment retention, cost-effectiveness, ease in provider training, and transportability will be discussed. Twelve articles regarding the use of DBT have been identified. Four of these articles address BPD as the primary diagnosis. One article addresses both BPD and Eating Disorders (EDs); one addresses Binge Eating Disorder. One article addresses comorbid personality disorder and depression in older adults, one article addresses oppositional-defiant disorder, one addresses PTSD related to childhood sexual abuse. Finally, one article addresses outcomes in correctional settings, while two articles address family outcomes.

Efficaciousness of DBT

Utilizing evidence-based practices in health services is theoretically important, and is also becoming more necessary from a practical standpoint – funding. In the United States, funding for mental health and substance abuse treatment is facilitated via the federal agency SAMHSA (the Substance Abuse and Mental Health Services Administration). Therefore, SAMHSA ratings of programs are deemed important. According to SAMHSA's National Registry

of Evidenced-Based Programs and Practices (NREPP), Dialectical Behavior Therapy is an accepted evidence-based practice or program.[6] Benefits have been found for all age groups and both males and females, although DBT has been mostly implemented with female participants thus far.[6] According to NREPP, DBT may be used with all races/ethnicities, in inpatient, outpatient and community settings, and (overall) has been utilized and evaluated in many different locales, with many different developed adaptations.[6] In the "Readiness for Dissemination" ratings on NREPP (a scale of 0.0-4.0), implementation materials were rated as readily available (4.0), with a fairly high training and support rating (3.0), giving an overall rating of 3.2.[6] DBT supplies are also usually relatively low-cost, as they may be handouts of worksheets or other workbook materials. Additional sections of this paper cover further information on the feasibility of using DBT within specific populations, ease in provider training, and transportability of DBT.

DBT for Borderline Personality Disorder (BPD)

The majority of DBT research thus far has been in adult female populations, with individuals either diagnosed with BPD or meeting diagnostic criteria for BPD. BPD, with a 12-month prevalence of approximately 1.6% in the United States, is associated with considerable functional impairment, high levels of service utilization and related consumption of health care costs, co-morbidity with other severe psychiatric disorders, and negative clinical outcomes.[7,8] Specific problems related to BPD include mood lability, emotion dysregulation, difficulties in relationships, and often times self-injury.[9] Families often report additional stigma ("surplus stigma") in relation to a diagnosis of BPD, given the complexity of the disorder and the challenge in treating it, reflected by family reports of practitioners and facilities desiring *not* to

provide care for individuals diagnosed with BPD.[9] In fact, until recently, BPD was considered

"untreatable".[10] Given the associated suicide threats and self-injury, BPD is a major risk factor

for suicide.[10] Sixty to eighty percent of borderline patients experience substantial self-harm,

and the completed suicide rate among individuals diagnosed with BPD is approximately 10%.[10]

As a major public health problem throughout the world, suicide ranks as the 3rd leading cause

of death among adolescents and emerging adulthood (ages 15-24) and the 2nd leading cause of

death among young adulthood (ages 25-34) in the United States.[11]

The good news is that, with the advent of DBT, BPD has been viewed as a more

treatable disorder, and perhaps not as pervasive (throughout the life span) as earlier thought.

As a personality disorder, BPD is diagnosed on Axis II of the *Diagnostic and Statistical Manual of*

Mental Disorders, or DSM, accompanied only by lifelong cognitive disorders such as Mental

Retardation.[12] Yet, the efficacy of DBT has shed new light on the manifestation of BPD, and

possibly other personality disorders as well.[16] For example, in a randomized control trial in the

Netherlands in 2003 (*n*=58), DBT was shown to be more efficacious than treatment as usual

(TAU), especially in individuals *severely* affected by BPD.[1] Over the course of the treatment

year, the self-mutilating behaviors of individuals assigned to the DBT group diminished, while

individuals in the TAU group gradually worsened with respect to self-mutilating behaviors.[1] At

the final assessment (week 52), only 35% (*n*=8) of the DBT group reported engaging in any self-

mutilating behavior in the past 6 months (median 1.5 times), versus 57% (*n*=13) of the TAU

group (median 13 times).[1]

Additionally, in a recent (2011) Australian controlled trial for participants diagnosed with

BPD and at least one other co-morbid (Axis I) disorder, a six month course of DBT involved

weekly individual psychotherapy (1-hr session), groups skills training each week for 2 hours, phone coaching availability between sessions, and consultation meetings each week for therapists.[13] The control group received TAU (clinical case management).[13] The study showed that DBT patients made less trips to the emergency room (mean, related to BPD) and used less (mean) psychiatric inpatient bed days.[13] Further data from this paper show the effect of DBT clinician training on patient outcomes – greater reductions in number of suicide attempts were seen in patients receiving therapy from an intensely trained therapist (intensely trained vs. basic training).[13] This sheds further light on this seemingly hard to treat diagnosis (BPD), as well as the use of DBT with related and comorbid disorders.

DBT for comorbid BPD and Eating Disorders (EDs)

Rates of comorbidity for EDs and BPD are approximately 3% for anorexia nervosa, restricting type (AN-R), and 21% for bulimia nervosa (BN).[14] This comorbidity of an ED with a personality disorder (PD) may have significance in the progression and treatment of the ED.[14] In an adapted inpatient DBT program in Germany (published 2010), 24 women diagnosed with BPD comorbid with an eating disorder (9 - AN; 15 - BN) were assessed pre-treatment, post-treatment, and at a 15-month follow-up.[14] An important aspect of this study was that all 24 women experienced eating disorder syndromes that were treatment-resistant, as they had not responded to previous inpatient eating disorder treatment (failed to respond twice on average).[14] This three-month inpatient treatment included group therapy (100 min. per session) three times a week, in addition to the weekly one hour session of individual therapy.[14] At pre-treatment, both AN and BN groups reported high scores of psychopathology and low

psychosocial functioning.[14] Both groups benefited significantly from the DBT inpatient program at post-treatment, with maintenance in improvement at 15-month follow-up.[14]

DBT for Binge Eating Disorder (BED)

In one of the first trials assessing the efficacy of DBT, 44 women diagnosed with BED participated in a 20-week course of adapted DBT skills training, with weekly sessions two hours long each.[15] Binge eating disorder is often associated with psychiatric comorbidity and is (perhaps not surprisingly) more common in males than other eating disorders.[15] In this 20 week adapted DBT skills training course, eighty-nine percent (16 of 18) of the DBT group remained abstinent (i.e., no binge eating in the last four weeks), while only 12.5% (2 of 16) of the control group remained abstinent.[15] Additionally, individuals receiving DBT treatment had significantly lower scores on EDE (Eating Disorders Examination) subscales concerning weight, shape, and eating, as well as significantly lower scores (compared to controls) on the EES (Emotional Eating Scale) subscales.[15] The lower EES scores indicated less likelihood of the urge to eat when experiencing anger, in particular.[15] Although this study was a treatment versus waitlist design and can only conclude that DBT skills treatment is better than no treatment, the modified DBT program supported the use of DBT for binge eating disorder.[15]

DBT for comorbid personality disorder (PD) and depression (Major Depressive Disorder, MDD) in older adults

Prevalence rates for personality disorders (PDs) range from 10-20% in older adults, an amount comparable to the prevalence of PDs in younger adults.[16] Generally, individuals diagnosed with PDs suffer from life disruptions similar to those suffered by individuals with BPD – those that affect cognitive, affective, and interpersonal functioning. Major depressive

disorder (MDD) is a fairly common mental illness, with a 12-month (U.S.) prevalence of approximately 6.7%, and 30.4% of those categorized as "severe" (or approximately 2.0% of the U.S. adult population).[17]   In the U.S., the lifetime prevalence of MDD is approximately 16.5%.[18] It is more common to have a diagnosis of a PD when there is also a diagnosis of MDD in older adults.[16] This is problematic because, as previously mentioned (as an Axis II disorder), personality psychopathology has been generally associated with chronicity, pervasiveness throughout the life span, and poor response to treatment.[12]

However, in a randomized clinical trial conducted in North Carolina of older adults co-morbid for personality disorder and depression, medicine plus DBT for depression (MED+DBT-D) evidenced a significant difference at six-month follow-up of the study: remission rates were 75% for MED+DBT-D, whereas they were only 31% for MED (medicine) alone.[16] This indicates that DBT is efficacious in older populations suffering from both a chronic disorder like MDD and (previously believed to be) difficult to treat disorder, such as PDs.

DBT for Oppositional-Defiant Disorder (ODD)

Oppositional-defiant disorder (ODD) is a disorder characterized by recurrent disobedient and hostile behavior toward authority figures, leading to maladjustment and impairment in social, educational, or work-related functioning.[19] In a study of individuals diagnosed with ODD (*n*=32) in North Carolina, adolescent participants in a modified outpatient DBT program showed, based on caregiver reports, significant increase in interpersonal strength and reduction in ODD symptoms and externalizing behaviors. This change was documented following 16 2-hour sessions of DBT group therapy.[19] Furthermore, individual participant reports indicated significant reductions in internalizing behaviors and depressive symptoms.[19]

This particular study suggests that DBT is feasible and efficacious with the adolescent population, specifically those with externalizing and internalizing behaviors fundamental to ODD symptomology.[19] The World Health Organization estimates that 20% of adolescents (defined as 10-19 years old) will experience a mental health problem in any given year, so efficacious treatment modalities for the adolescent population are sorely needed.[20]

DBT for Post-traumatic Stress Disorder (PTSD)

PTSD is an extreme anxiety disorder, commonly seen in veterans and those confronted with war and its effects, in which an individual has experienced a trauma and is having resulting life turmoil and poor quality of life. PTSD psychopathology may include reliving the traumatic experience, repression of memories of the experience, hypervigilance, an exaggerated startle response, nightmares, and dysfunctional cognitions such as suicidal ideation.[21]

In a recent (2011) pilot study in Germany, DBT adapted for PTSD (DBT-PTSD) was utilized in a 3 month intensive residential treatment program for individuals having suffered childhood sexual abuse (CSA).[21] DBT-PTSD has previously been used to successfully treat individuals suffering from PTSD due to interpersonal violence and has three aims: (1) to help patients diminish the fears of primary emotions associated with the trauma, (2) to help patients query secondary emotions associated with those primary emotions (e.g. guilt, shame), and (3) to encourage the thorough acceptance of the details associated with the trauma.[21]

Twenty-nine patients diagnosed with PTSD related to CSA met twice weekly for individuals sessions (35 minutes each session, one quarter of which was dedicated to exposure techniques) plus weekly group sessions including 90 minutes of skills training, 60 minutes of group intervention focusing on self-esteem, 60 minutes of psychoeducation related to PTSD,

and three 25 minute mindfulness sessions.[21] Results from this intensive inpatient program were assessed via questionnaires administered at baseline (T0), treatment end (T1), and 6 week follow-up (T2).[21] All 29 patients completed the program and no patient showed deterioration; however, 4 patients did not complete assessment at T2.[21] Overall, a strong treatment effect was found, according to pre- and post-test measurements.[21] The authors concluded that DBT-PTSD for CSA is a promising therapeutic treatment modality for chronic PTSD related to CSA.[21]

DBT for correctional settings

In a study of 18 women and 45 men in state-run prisons in Connecticut (2009), an adapted DBT program, DBT-CM (DBT-Corrections Modified) was implemented in order to assess its efficacy in difficult to manage, aggressive and/or impulsive correctional populations.[22] Sixteen weeks of twice weekly DBT-CM groups was followed by individual DBT coaching or case management (randomly assigned) for an additional eight weeks.[22] For the DBT-CM groups, aggressive and impulsive behaviors, as measured by correctional system disciplinary tickets, showed improvement following the initial 16 weeks skills training groups.[22] Especially for male adults, support for the efficacy of DBT was also shown via improved affect and coping and reduced aggression.[22] Additional improvements were found with the added interventions of case management and DBT-CM coaching (post-initial 16 weeks), although most long-term improvements, particularly in psychopathology, were found in females and adolescent males.[22]

DBT for family outcomes

Family members of individuals with mental illness are often overwhelmed with illness symptomology and potential and real adverse outcomes. This is especially true for family members of those diagnosed with BPD, given the high level of suicidal ideation and threats,

(potential and real) self-mutilation, and lifestyle chaos.[9] Family members of individuals with

BPD often experience grief and loss (of potential, etc.), depression, burden, and other types of

distress.[9] Family Connections, a 12-week DBT program for relatives of individuals with BPD,

structurally modeled after the National Alliance for the Mentally Ill's (NAMI) Family-to-Family

Program (FFP), showed significant reductions in grief and burden among participants.[9] Grief

was conceptualized as "the cognitive, emotional, and psychological experiences such as

sadness, pain, and loss associated with having a relative with a mental illness" and burden was

conceptualized as "…stressors due to the ill relative's symptomatology and behavior, both on

other relationships and interfering in daily activities".[9] From pre- to post-group assessment,

there was also a significant increase in the construct of mastery, conceptualized as "the

identification of self-management skills to cope with having a relative with a mental illness".[9]

Additionally, the study indicated maintenance of these changes at 6 months post baseline.[9]

Similarly, other family outcomes shown to be improved by DBT models include

outcomes involving individuals with dementia.[23] Caregivers of those with dementia may

experience compromised physical and mental health which may result in social isolation and

clinically significant depression, among other health problems.[23] Drossel, Fisher, and Mercer

(2011) adapted the DBT skills training manual for use with family caregivers of persons with

dementia, at risk for elder abuse.[23] This group (*n*=16) completed 9 weeks of DBT skills training,

resulting in improved psychosocial adjustment, enhanced help-seeking behaviors and

emotional well-being, and less fatigue.[23] The success of the program was further evidenced by

the request by 6 of the 16 participants for "booster" DBT groups (groups conducted again, with

similar content), in which they participated in at the end of the first group.[23] This study

contributes to evidence that DBT is feasible to implement in various populations, even given only a brief amount of time (in this case 9 weeks).[23]

Long-term efficacy of DBT

In Germany in 2004, 31 participants meeting criteria for BPD received inpatient DBT treatment, while 19 participants were placed on a waiting list and received treatment as usual (WL-TAU) in the community.[24] Following the three months of treatment or WL-TAU, a post-assessment was delivered at month 4 (approximately 1 month after the DBT group was completed).[24] DBT was found to be superior to TAU, per significant improvement in seven of the nine psychopathological variables analyzed (including depression, anxiety, and interpersonal functioning).[24] Additionally, measurements indicated that 42% of the DBT participants had clinically recovered at post-assessment (4 months total).[24]

The stability of the short-term efficacy of this DBT program was then assessed in a naturalistic follow-up of the patients in the DBT group - participants continued in a natural way, visiting their mental health care providers and taking medications as prescribed.[25] This naturalistic observation period lasted a total of 21 months after discharge from the DBT program, in which the participants were only permitted to receive TAU, and not further DBT treatment.[25] After a total of two years (21 months plus the initial three months treatment), all treatment effects from the first study remained statistically significant, even appearing to improve over time.[25] Individuals engaging in self-injury (non-suicidal) at baseline (74%) dropped to 23% at the end of the follow-up period.[25] Additionally, 50% of the participants evidenced clinical recovery by the end of the follow-up period.[25] Interestingly, the participants, meeting criteria for BPD, were also concurrently diagnosed with anxiety disorder (65%), major

depression or dysthymia (61%), and/or an eating disorder (39%).[25] This supports evidence that

a short-term inpatient DBT program can be utilized in a population with many comorbidities,

and still support long-term improvements after patients return to their normal lives.

Treatment Retention

One of the primary goals of DBT is treatment retention, so that individuals can learn the

skills necessary to "create a life worth living".[1,5] In the previously cited randomized clinical trial

conducted in the Netherlands (2003), significantly more individuals assigned to the DBT group

(*n*=17, 63%) remained with the same therapist for the entire year, versus individuals assigned to

the control group (*n*=7, 23%).[1] In the 2001 binge eating disorder study, the DBT group dropout

rate was only 18% (4 of 44, with 2 of those 4 dropping out before treatment began).[15] All but

one participant attended 70% or more of the 20 group sessions, so group session attendance

was regular.[15] Additionally, in the 2011 DBT-PTSD for CSA study, not one patient dropped out

of treatment.[21]

Cost-effectiveness of DBT

DBT shows further potential in the area of cost-effectiveness. Although a 2006 cost-

effectiveness assessment in an economic systematic review of psychological therapies

(including DBT for BPD) did not support the cost-effectiveness of DBT, it suggested that DBT has

the potential to be cost-effective.[26] In 2010, a clinical and cost effectiveness study of DBT for

BPD was undertaken in Australia.[27] DBT and treatment as usual (TAU) were provided in a

routine Australian public mental health service.[27] In a cost-benefit analysis of DBT versus TAU

over six months of treatment, the study suggested that the public mental health service would

save approximately $237,080 (Australian) dollars for the 40 patients over the three year

program.[27] This reflected savings of an average of $5,927 (Australian) dollars for each patient receiving DBT.[27] More research is warranted in the cost-effectiveness of DBT, but these findings bode well.

Ease in Provider Training

DBT programs can be implemented by bachelor's, master's, and doctoral level students in clinical psychology and social workers, as well as lay people such as family members.[9,23] For example, the Family Connections (FC) Program mentioned previously was led by trained family members.[9] Leadership included initial participation in the Family Connections intervention as a group member, followed by 20 hours of training in which the individual learns how to lead an FC group (including lecture, discussion, and role playing), and weekly consultation with trainers after initiation of a new FC group in which they are the leader.[9]

Where human resources in public mental health services are difficult to find, such as in developing (and some developed) countries, DBT could be an area ripe for the implementation of task shifting. Task shifting is becoming more common in global health, and involves assigning tasks, manageable by para- and/or non-professionals, to those health care workers who are more present, on the ground, and capable of administering those tasks.[27] Task shifting frees up specialists – in this case, mental health professionals such as psychiatrists and psychologists – to provide support and guidance to the para- and non-professionals, hence allowing a wider range of impact of the intervention, because (overall) the needs of more individuals are being met.[27]

Transportability of DBT

Although no formal research published on the topic of the transportability of DBT could be found, in its manualized form , the Skills Training Manual of DBT is portable and easy to

follow. Drossel, Fisher, and Mercer point out that, due to the lack of reference to any specific psychopathology within the manual itself, the manual and its worksheet handouts may also be more acceptable in the community and within non-medical settings.[23] The Family Connections program (previously mentioned) was also conducted in various locations by different sets of leaders, further suggesting transportability of DBT and DBT-based programs.[9]

CONCLUSION

The aims of this paper were to provide a detailed overview of DBT, to elucidate the growing body of research utilizing DBT for a host of mental health problems, and to thus encourage the further research and use of DBT in public and global mental health settings. The evidence provided herein suggests that DBT has been shown to be beneficial in both inpatient and outpatient programs, programs led by family members and formally trained staff (however, the intensity of the DBT training itself may be a better indicator of the patient outcomes than the degrees held by the DBT facilitators and/or group leaders), programs for many diagnoses, age groups, populations and purposes. Additionally, positive outcomes have been shown following as little as nine weeks of DBT, so only a short amount of time may be needed to implement DBT programs and see results.[23] This supports evidence from previous studies examining primarily inpatient DBT programs.

An area that requires further research in DBT includes the translatability of difficult DBT concepts and acronyms, such as "wise mind" and "PLEASE MASTER". Will these concepts and acronyms be translated well, or will they lose inherent meaning? In a conversation with S. Banawan, Ph.D. (April 2011), a local DBT provider, it was communicated that some of this

translation is already being undertaken with a deaf population in the United States, so quality

concept and acronym translation may very well be feasible.

Another area mandating research, especially for global mental health, includes the use

of DBT in crisis situations such as post-natural disaster and in war-torn countries. Is there a

truncated version of DBT skills training that can be packaged and disseminated in a very short

amount of time, in order to see results? The DBT-PTSD adaptations show promise in this area,

as PTSD rates may increase post-disaster or following wartime. This may lead to DBT research

in more developing and/or low-income countries (LIC). How socially acceptable would DBT be

in LIC environments? The Eastern-influenced philosophy of DBT may allow it to be more easily

accepted than other "Western" mental health interventions. Research of this kind will be

necessary, given that almost all of the research on DBT conducted thus far has been in high-

income countries. Nonetheless, given its potential for sustained efficacy with various groups,

its high treatment retention, its promising cost-effectiveness, its ease in training providers and

transportability - DBT should be investigated as a mental health intervention for use the world

over.

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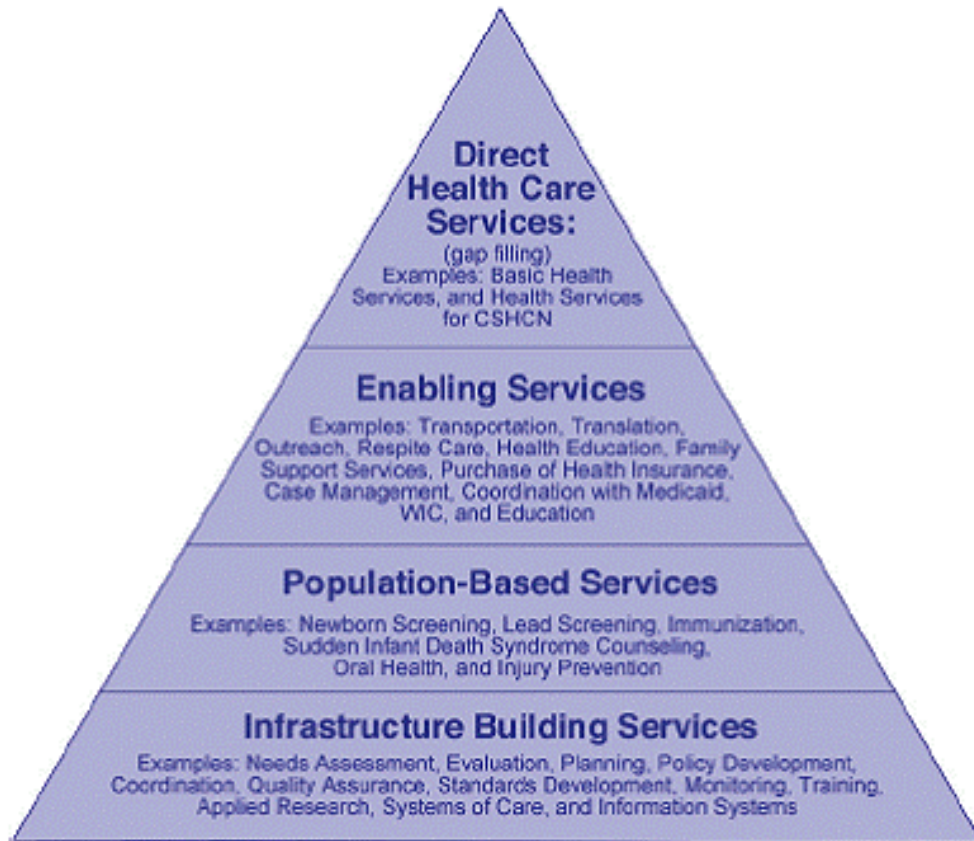
Appendix A
Article Matrix

Title	year	n (at least 15)	Disorders (& special circumstances)	Country
1. "Dialectical Behaviour Therapy for Posttraumatic Stress Disorder Related to Childhood Sexual Abuse: A Pilot Study of an Intensive Residential Treatment Program"	2011	29	comorbid PTSD	Germany
2. "A DBT Skills Training Group for Family Caregivers of Persons With Dementia."	2010/2011	16	caregiving dementia	USA
3. "The effectiveness of dialectical behaviour therapy in routine public mental health settings: An Australian controlled trial"	2010	43	BPD	Australia
4. "Dialectical behaviour therapy and an added cognitive behavioural treatment module for eating disorders in women with borderline personality disorder and anorexia nervosa or bulimia nervosa who failed to respond to previous treatments. An open trial with a 15-month follow-up"	2010	24	BPD EDs	Germany
5. "Treatment of impulsive aggression in correctional settings"	2009	63	correctional impulsivity aggression	USA
6. "Do improvements after inpatient dialectical behavioral therapy persist in the long term? A naturalistic follow-up in patients with borderline personality disorder"	2008	31	BPD	Germany
7. "Treatment of older adults with co-morbid personality disorder and depression: a dialectical behavior therapy approach"	2006	34 65, 37	older pop PDs depression	USA
8. "Family Connections: A Program for Relatives of Persons With Borderline Personality Disorder"	2005	44 (34 families)	BPD fams	USA
9. "A modified DBT skills training program for oppositional defiant adolescents: promising preliminary findings"	2005	32	ODD	USA

10. "Effectiveness of inpatient dialectical behavioral therapy for borderline personality disorder: a controlled trial"	2004	31	BPD	Germany
11. "Dialectical behaviour therapy for women with borderline personality disorder: 12-month, randomised clinical trial in The Netherlands"	2003	58	BPD	The Netherlands
12. "Dialectical Behavior Therapy for Binge Eating Disorder"	2001	44	BED	USA

KEY: BPD: Borderline Personality Disorder
ED: Eating Disorder
PDs: Personality Disorders

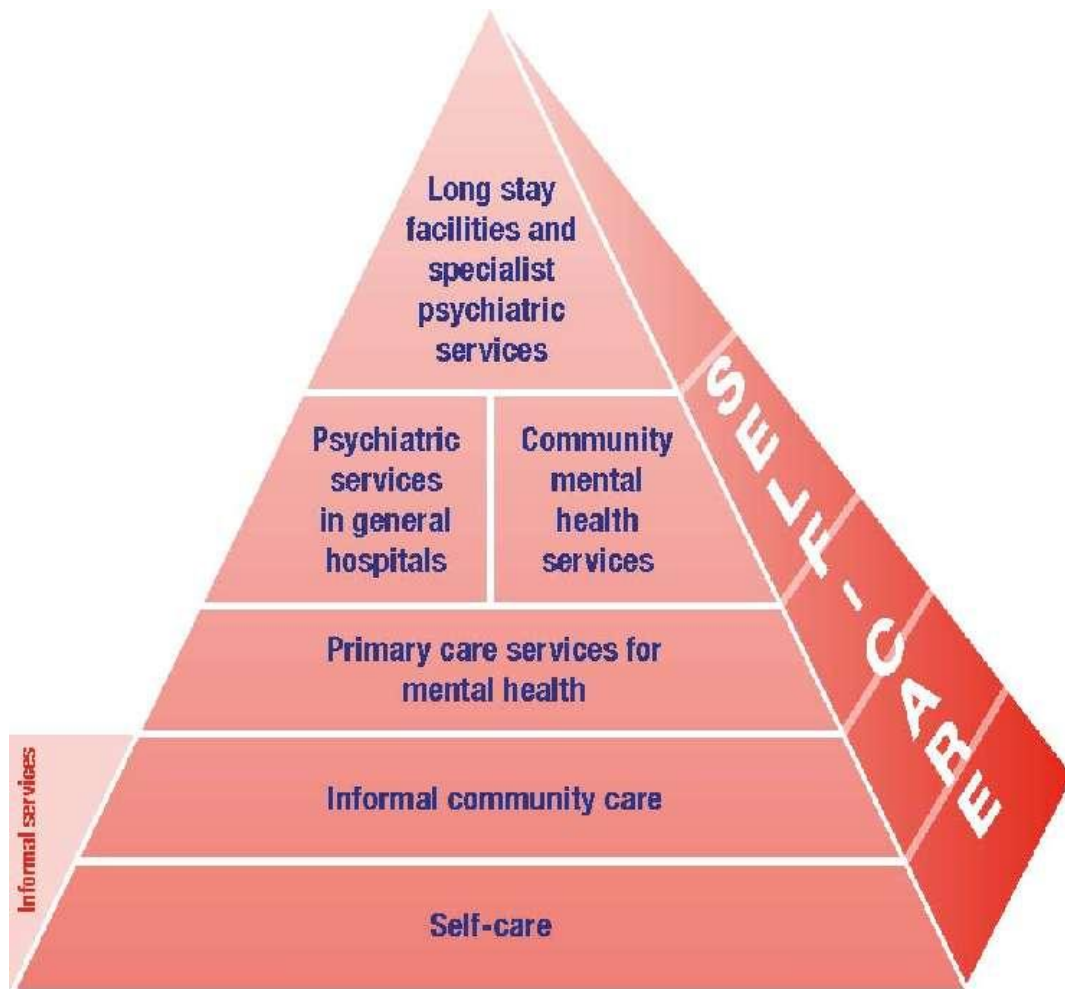ODD: Oppositional Defiant Disorder
BED: Binge Eating Disorder

The MCH Pyramid of Health Services

Appendix C
WHO Pyramid of Optimal Mix of Services
for Mental Health

Appendix D
Wise Mind Venn Diagram

Reasonable Mind

Emotional Mind

Wise Mind

Body Mind