

The effect of Dialectical Behaviour Therapy on clients diagnosed with Borderline Personality Disorder in a rural setting of NSW, Australia

Research completed by Pam Stanford CNS
Orange Adult Community Mental Health Team
Pamela.Stanford@gwahs.health.nsw.gov.au



Research Mentor – Dr Helen Stain from the Centre for Rural and Remote
Mental Health, University of Newcastle.

DBT Program Facilitator – Elizabeth Gifford
Elizabeth.Gifford@gwahs.health.nsw.gov.au

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Key Words: Dialectical Behaviour Therapy (or Behavior), DBT; Borderline Personality Disorder, BPD, Adults, self harm, parasuicidal behaviour.

Abstract/Main Message

Background: Clients diagnosed with Borderline Personality Disorder (BPD) are known to utilize mental health services at a greater rate than people with other mental illnesses (with the exception of schizophrenia). These clients are difficult to engage and treat because of the complexity of the problems they experience. Conventional approaches to treatment often, unintentionally, reinforce maladaptive behaviours. The suicide rate for this diagnosis group is high at 10% (Swartz, 1990).

A therapy known as Dialectical Behaviour Therapy (DBT) has been coordinated from the Curran Centre for six years for these clients. Research literature demonstrates DBT reduces admission rates, occasions of self-harm/suicidal behaviours and occasions of service which achieves significant cost saving for the service. Importantly, the clients' quality of life improves with decreases in depression, anxiety and stress.

Aim: To determine if DBT can be effective in a rural based public mental health clinical setting.

Method: This is a retrospective study (N=16) looking at the demographics; a file audit (12 months pre and 12 months post DBT program); two measures - Depression Anxiety Stress Scale (DASS) and a Self Harm Inventory (SHI), both completed at baseline and three monthly whilst on program.

Results: The results show significant reductions in the participants' level of: depression ($p=0.011$), anxiety ($p=0.001$), and stress ($p=0.001$), indicating an improved quality of life. Also, self-harm ($p=0.013$), hospital admissions ($p=0.008$) and community contacts ($p<0.001$) are significantly reduced.

Conclusions: The results show DBT is an effective treatment for people diagnosed with BPD and can be utilised in a rural public mental health service.

Implications: 1). This represents a cost saving for the service of \$10,277 per person (for the 12 months post DBT compared to the 12 months pre DBT).
2). Early intervention would enhance greater savings to the service.
3). Clinicians have good support through the consult group and are able to provide a treatment with clinically relevant and significant results.
4). The program is set out in a manual, therefore staff from different professional backgrounds can be easily trained as clinicians to be involved in the program.

Questions that still need to be asked: 1). What do Managers and Administrators understand about BPD, its available treatments and cost saving to the service?
2). What is the attitude of staff towards this client group and their (staff) understanding of available treatments?
3). Why is it taking so long to roll out this program when the evidence indicates significant reduction in client disability and their contacts with the service?

Executive Summary

“DBT has helped me in every aspect of my life – I now work two days per week (after not working at all for 12 years). I have a new best friend and go out socially. My relationships with my children have improved and I don’t get stressed by them so much and tolerate them. I have the skills to observe myself, especially in relation to my health and have had the confidence to seek better medical attention. I am calmer, healthier, and happy and have confidence in myself. I am able to cope with situations that before would have upset me. I am able to see more of the picture of life. I have also lost weight and have a better self-image. DBT has greatly helped me in all aspects and I continue to work on it every day.”

Participant – completed stage one of DBT - 2009

Issue

Clients diagnosed with Borderline Personality Disorder (BPD) are known to utilize mental health services at a greater rate than people with other mental illnesses (Krawitz, 1999) (except schizophrenia). The suicide rate for this diagnosis group is high at 10% (Swartz, 1990) and up to 45% if there is co-morbidity with mood disorders and substance abuse. These clients are difficult to engage and to treat because of the complexity of the problems they experience. Conventional approaches to treatment often, unintentionally, reinforce poor coping behaviours (Gunderson, 1987).

The needs of people with BPD are inadequately met by mental health services and a clear direction on more effective ways of treatment would be useful (Krawitz, 1999). In 2008, this diagnosis was brought to the attention of the Australian Senate Standing Committee on Community Affairs for the first time. The report highlights that the needs of this group of consumers does not get a mention in mental health policy or the National Mental Health Strategy (Senate Community Affairs Committee Secretariat, 2008).

Stigmatisation of BPD has lead to discrimination (Krawitz, 1999) and sufferers are blamed for their illness and regarded as attention seekers (Senate Community Affairs Committee Secretariat, 2008), and have been overlooked in past mental health services and reforms. This has lead to marginalisation of people with BPD within existing service systems.

Clinician values and feelings have been identified as critical determinants for effective treatment and Krawitz (1999) proposes that funding for training is likely to be cost effective and give better results for the clients. Health systems need to provide peer advice and support, allowing clinicians to take professionally indicated risks (Krawitz, 1999). People with BPD have a good prognosis (Krawitz, 1999) and can get better when provided with appropriate, effective treatment.

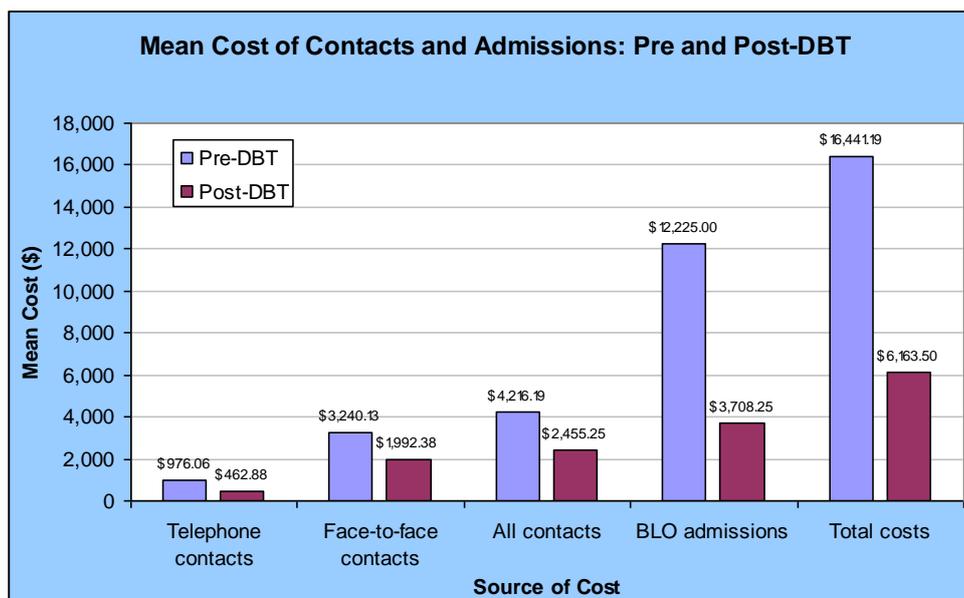
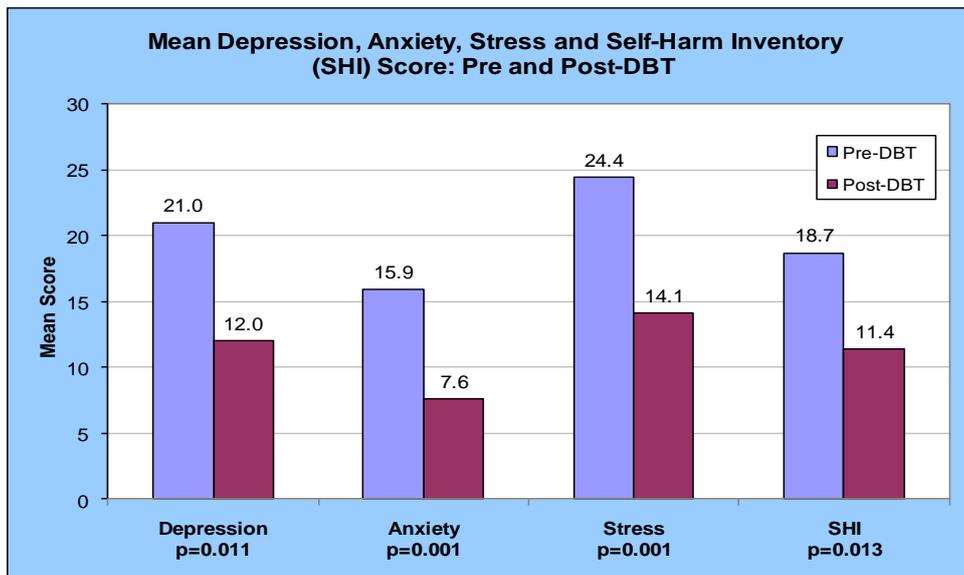
This is a retrospective study evaluating a relatively recent therapy known as Dialectical Behaviour Therapy (DBT) which has now been used to treat people with BPD in a rural location for six years. The literature demonstrates DBT

reduces: hospital admissions and occasions of service in community; occasions of self-harm and suicidal behaviours (leading to improved quality of life), and ultimately, a cost saving to the service.

Results of Study

The results show DBT is effective and can be utilised in an everyday clinical setting of a rural public mental health service. This study has replicated results described in the literature (Brassington, 2006; Prendergast, 2007; Linehan, 2006; Verheul, 2003).

People with BPD do respond well to evidence based treatment as shown with the significant reductions in self-harm ($p=0.013$) – from 18.7 to 11.4; depression ($p=0.011$) - from severe to mild (21 - 12); anxiety ($p=0.001$) - from severe to mild (15.9 - 7.6); and stress ($p=0.001$) - from moderate to normal (24.4 - 14.1). See figure below.



Also, as shown in the figure above, there has been a significant reduction in contact with community and inpatient services post-DBT. This is evidenced by the reduction in length of stay (LOS) days at Bloomfield in the 12 months post DBT dropping to 1.14 days compared to 22.56 days in the 12 months pre DBT

($p=0.011$). Also, statistically significant reductions can be seen in total community contacts going from 39 pre treatment to 15.5 post treatment ($p<0.001$).

Implications of Results

1. DBT is effective and can be utilised in an everyday clinical setting of a rural public mental health service.
2. Clinicians have a way to engage and to treat this difficult client group, with clinically significant results and with good support (consult group).
3. The reduction in the Bloomfield LOS days represents a cost saving for the service of \$8,517 per person for the 12 months post DBT compared to the 12 months pre DBT. The total cost saving per person, including admissions and community contacts is \$10,277.
4. Early intervention (especially youth programs) would enhance greater savings for the health services as clients get well earlier with many years of treatment no longer required.
5. The program is set out in a manual; therefore staff from different professional backgrounds can be easily trained as clinicians to be involved in the local program.
6. Regular staff education about BPD, available treatments and effectiveness would most likely lead to better services for this client group and less difficulty (burnout) for staff when working with them.

Questions that still need to be asked

1. What do Managers and Administrators understand about BPD, its available treatments and cost saving to the service?
2. What are attitudes of staff towards this client group and their understanding of available treatments for BPD?
3. Why is it taking so long to roll out this program when the evidence indicates significant reduction in client disability and their contacts with the service?
4. Should BPD treatments be taught to mental health nurses and allied health professionals at university?

More About the Study

Aim: To determine whether or not the results of this study replicate the results stated in the research literature (occasions of self harm/suicidal behaviours; reduce admissions to hospital; reduce occasions of service in the community) and to see if DBT can be utilised in a rural based public mental health clinical setting.

Method: This is a retrospective study looking at the demographics; a file audit (12 months pre and 12 months post DBT program); two measures - Depression Anxiety Stress Scale (DASS) and a Self Harm Inventory (SHI), both completed at baseline and three monthly whilst on program.

Inclusion criteria: People who have participated in the DBT program and have been diagnosed by a psychiatrist as having BPD; consented to participate in the research project N=19 (in this analysis N=16); and had completed Stage 1 of DBT compared with those that had not completed Stage 1.

Full Report

1. Context:

Policy and Managerial Issues

Researching information on policy relevant evidence for people diagnosed with Borderline Personality Disorder (BPD) reveals a shortage of policies specific to this disorder in Australia. In 2008, this diagnosis was brought to the attention of the Australian Senate Standing Committee on Community Affairs for the first time. The report itself, comments on the fact that the needs of this group of consumers does not get a mention in mental health policy or the National Mental Health Strategy (Senate Community Affairs Committee Secretariat, 2008). Interestingly in 1999, almost 10 years earlier, the New Zealand Mental Health Commission asked for information on this diagnostic group and the report (Krawitz, 1999) was very similar to the issues raised in the Australian Senate Committee in 2008.

In the Australian Senate Committee report, three of the national mental health consumer advocacy peak bodies and the national mental health carer advocacy peak body presented a joint submission. Many other mental health sectors were represented, including service providers, support groups, researchers, clinicians, hospital providers and insurers.

The NZ MH Commission became aware of the diverse views on how best to provide for people with the diagnosis of BPD. The project specifications for Krawitz and Watson (1999) were: The needs of people with BPD are inadequately met by mental health services and often the negative critical incidents occurring, involve this group of people. The evidence says this group are high users of the mental health services and a clear direction on more effective ways of treatment would be useful (Krawitz, 1999).

For people suffering BPD, there are high rates of suicide and self-harm (Senate Community Affairs Committee Secretariat, 2008; Krawitz, 1999), caused by intense emotional distress, in particular – anxiety and anger. There are extreme emotional responses to minor triggers and poor decision making leading to risky, impulsive behaviour (e.g.: unsafe sexual behaviour) (Senate Community Affairs Committee Secretariat, 2008). Social isolation, rejection and attachment issues are common, due to difficulty relating to others. There is often a diagnosis overlap and co-morbidity (Krawitz, 1999) as this group often suffers affective disorders and can be paranoid and suspicious (Senate Community Affairs Committee Secretariat, 2008), which lead to abuse of alcohol and other drugs. Some call this ‘self-medicating’ in an attempt to stop the ‘bad’ feelings and thoughts. People with this diagnosis are high users of the services, (being mental health – inpatient and community, emergency department, ambulance, police, alcohol and other drugs and primary care). Emergency Departments and secure in-patient units are not therapeutic for this group and can contribute to the cycle of admission, maladaptive behaviour (often destructive) and readmission that is prevalent among BPD. Stigmatisation has led to discrimination (Krawitz, 1999) and sufferers are blamed for their illness and regarded as attention seekers (Senate Community Affairs Committee Secretariat, 2008), and have therefore, been overlooked from mental health services and reforms. This has led to marginalisation of people with

BPD within existing service systems and hence, poor access to services. This group of consumers is not mentioned in mental health policy or strategy (Senate Community Affairs Committee Secretariat, 2008); therefore, mental health services are poorly equipped to address their needs. For some time there has been individual and institutional avoidance of proactively treating sufferers of BPD. Mental health services only respond when this group is suicidal, which encourages the behaviour clinicians are trying to reduce (Krawitz, 1999).

Clinician values and feelings have been identified as critical determinants for effective treatment and Krawitz (1999) proposes that funding for training is likely to be cost effective and give better results for the clients. Also, systems need to provide peer advice and support, allowing clinicians to take professionally indicated risks (Krawitz, 1999). People with BPD have a good prognosis (Krawitz, 1999) and can get better when provided with appropriate, effective treatment. Resources for this diagnostic group need to be on par with other disorders with similar mortality, morbidity, disability and service usage (Krawitz, 1999).

The Australian coalition of 'peak bodies' called for early intervention to reduce the huge toll suffered by people with BPD and therefore, limit the repercussions among their families – particularly the children of these people (Senate Community Affairs Committee Secretariat, 2008), who are now being identified as also needing mental health and other services. The committee states they are quite aware now of the results of child abuse on survivors and the insidious and devastating effects this causes throughout their lives. (Senate Community Affairs Committee Secretariat, 2008). Being aware of this and the fact that these people can respond well to treatment is an important factor in calling for the urgent need of accessible, appropriate treatments and an end to the marginalisation experienced by people diagnosed with BPD, within the community and the mental health sector (Senate Community Affairs Committee Secretariat, 2008).

Recommendations from the Australian Senate committee

- A taskforce be funded by the National Advisory Council on Mental Health to assess public awareness, prevention and intervention initiatives, in light of the link between childhood sexual abuse and mental illness and to guide the government in the implementation of programs for adult survivors.
- The Australian, state and territory governments, through COAG, jointly fund a nation-wide Borderline Personality disorder initiative, which is to include:
- Designated outpatient care units in selected trial sites to provide assessment, therapy, teaching, research and clinical supervision;
- Awareness raising programs – one to be targeted at adolescents and another to be targeted at primary health care and mental health care providers, aimed at changing attitudes and behaviours toward people with BPD, and
- A training program for mental health services and community-based organisations in the effective care of people with BPD.

Recommendations from the NZ Report

- National leadership tasks are numerous and need time and importance.
- National leaders to address the “culture of fear” surrounding treatment of BPD and create an environment for clinicians to take professionally indicated risks.
- Local system: clear policies; procedures and guidelines; skilled supervision; senior clinical staff and management support; a calm, confident environment; and a capacity to resolve conflict.
- The model that best suits the public mental health system is Dialectical Behaviour Therapy (DBT).
- DBT is evidence based, effective, requires modest additional training.
- Workforce training recommended: Foundation training to 40% of all staff and 20% of staff in other areas e.g.: crisis.
- Key clinicians need to be empowered - the most important staff role in treatment.
- Crisis work is to return the client to pre-crisis functioning ASAP.
- Distinguish suicidal and self-harm behaviour ASAP - to determine treatment pathway.
- Acute in-patient stays - be client controlled, brief and/or avoided and alternatives sort.
- Resources need to be on par with other disorders with similar mortality, morbidity, disability and service usage.

The Multiaxial Assessment system is a diagnostic tool that marginalises people with BPD. The patients’ main problem or clinical disorder is listed as ‘Axis I’ – for example: Schizophrenia, Bipolar Disorder, and Major Depression. However, BPD sits under Axis II and if the patient is not given one of the above mentioned Axis I diagnosis, they are deemed to sit outside ‘core-business’ of mental health services. This has made it easy for decision makers to justify not training staff and not offering the appropriate treatment needed by this diagnosis group (Rossiter, 2008).

There has not been a national coordinated approach to the treatment of BPD in Australia, as noted in the Senate Committee report. The exception to this are the two State based programs - the Spectrum program in Victoria and more recently, the Centre for Psychotherapy in Newcastle NSW, which also supports the treatment of people with BPD.

Suicide prevention has been on the State and Federal Governments agenda for some years. Paris (1992) cites four studies of psychological autopsies reconstructed using DSM III-R Axis I and Axis II diagnoses of young people who had committed suicide – all four showed a third of patients were retrospectively diagnosed with BPD (Paris, 1992). Also, Perseus et al (2003) cites Runeson & Beskow, who also found that a third (19 of 58) of young suicides were found to have a diagnosis of BPD (Perseus, 2003). This speaks loudly of the need for **appropriate** and **early treatment** for people with self harm behaviours and people diagnosed with BPD. The risk of suicide increases the longer the disorder is untreated.

A core principle of all successful therapy, including DBT – which runs against mental health legislation, is that clients are to be responsible for their behaviour. Committal is disempowering for the client and gives responsibility for the clients behaviour, to the clinicians (Krawitz, 1999). Perseus et al (2003. p.223) notes from client interviews “I don’t believe in forced commitment to psychiatric care, I don’t believe it leads anywhere and it was really devastating for me” and “It was simply like being locked-up and safe-kept, they didn’t do anything” (Perseus, 2003).

Background

What is Borderline Personality Disorder (BPD)?

The majority of clients diagnosed with BPD are women (75 to 90%) (Senate Community Affairs Committee Secretariat, 2008; Swartz, 1990; Paris, 1992) and most have been invalidated as children, with different forms of abuse and trauma - commonly sexual, physical and emotional abuse (70 to 95% of those diagnosed) (Senate Community Affairs Committee Secretariat, 2008; Linehan, 2006; Krawitz, 1999; Paris, 1992). Therefore, there is a close association between childhood abuse and BPD (bpd about, 2010). Males are more likely to be treated in the substance abuse or the justice systems, due to the fact that males are less likely to express emotionally. (Mental Illness Fellowship Victoria 2005)

Diagnosis of BPD is made after being seen by an experienced mental health clinician. This could take one or a number of interviews before a formal diagnosis can be given and depending on the level of disability. The diagnosis is based on criteria listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM – currently DSM-IV-TR - American Psychiatric Association (APA), 2000). Essentially BPD is a persistent pattern of unstable interpersonal relationships, self-image and mood, as well as distinct impulsive behaviour, beginning by early adulthood and present in a variety of contexts and are indicated by five (or more) of the following:

1. frantic efforts to avoid real or imagined abandonment.
2. a pattern of unstable and intense interpersonal relationships characterised by alternating between extremes of idealization and devaluation.
3. identity disturbance: markedly and persistently unstable self-image or sense of self.
4. impulsivity in at least two areas that are potentially self-damaging (e.g. spending, sex, substance abuse, reckless driving, binge eating). This does not include suicidal or self-harming behaviour.
5. recurrent suicidal behaviour, gestures, or threats, or self-mutilating behaviour.
6. affective instability due to a marked reactivity of mood - intense feelings that can last from a few hours to a few days.
7. chronic feelings of emptiness.
8. inappropriate intense anger or difficulty controlling anger.
9. transient, stress-related paranoid ideas or severe dissociative symptoms.

There are over 100 combinations of symptoms possible, therefore not all people diagnosed with BPD will present in the same way. Therefore, levels of distress and disability also vary (American Psychiatric Association: DSM-IV-TR, 2000).

The prevalence of BPD has been estimated through research that people diagnosed with BPD could be almost two per cent of the general population (Swartz, 1990), three quarters of whom are women. Another study has suggested that if it is an overestimation and it is only one percent, then the disorder is as common as schizophrenia (Paris, 1992). Many different settings and communities around the world have identified similar rates of BPD. It is approximately five times more common among immediate relatives of those with the disorder, than in the general population (borderline personality today, 2010). BPD is thought to be on the increase, as there is an increasing prevalence of impulsiveness (*DSM - criterion 4*), in the form of: more suicidal gestures (young females), more completed suicides (young males) and more substance abuse by young people, which are all common to this disorder (Paris, 1992).

Symptoms of BPD

The childhood abuse leads to disturbed attachment and inability to set appropriate boundaries, frequently leading to problems in relationships (*DSM - criterion 2*) (Paris, 1992) and can be manifest in a number of ways. Relationships are either formed too quickly or terminated too early because of an inability to tolerate the intense fear of abandonment (*DSM - criterion 1*) that poor early attachment causes (Gunderson, 1987). These individuals may also stay in abusive relationships because any relationship is better than being alone. Intense emotions such as anger (*DSM - criterion 8*) and anxiety (Krawitz, 1999) also impact on relationships and on the client's ability to effectively negotiate their needs. Managing painful emotions and chronic feelings of emptiness (*DSM - criterion 7*), through self harm and suicidal behaviours put intense pressure on relationships. This ultimately results in people with BPD being rejected and socially isolated (Senate Community Affairs Committee Secretariat, 2008) adding to an unstable self-image (*DSM - criterion 3*).

People suffering from BPD express their distress and elicit care through suicidal gestures and use self harm behaviour (*DSM - criterion 5*) (Linehan, 2006) to regulate their intense emotions. This inadvertently, de-sensitizes families, carers and professionals to the very real risk of death by suicide (Rossiter, 2008). This risk is high - approximately 10 per cent (Swartz, 1990; Linehan, 2006) and equal to the risk for those diagnosed with Schizophrenia and Bipolar Affective Disorder. Self-harm is common (Linehan, 2006; Gunderson, 1987) and seen in the form of cutting, cigarette burns, over medicating, gambling, and over spending. This would also include risk taking behaviour (unsafe sexual behaviour and driving cars fast). Medication misuse is problematic – either with non-compliance and therefore the depression and anxiety are not being treated, or overdose in an attempt at suicide. It has often been thought that the infliction of self-harm is an attempt to experience pain and gain assurance of being alive. This is to counteract the emotional numbness or void experienced most of the time. Also, common to this diagnosis is a symptom called 'dissociation' (*DSM - criterion 9*) (Gunderson, 1987), which is when the client feels separated from themselves, not feeling anything at all. It is at these times that self-harm or attempts at suicide are more likely to occur.

The intense emotion dysregulation and poor impulse control can also lead to substance abuse (Gunderson, 1987), a significant co-morbid disorder experienced by this client group (Grilo, 1997). If symptoms associated with trauma are also accompanied by brief episodes of paranoia (*DSM - criterion 9*), clinical depression (*DSM - criterion 6*) (Linehan, 2006; Rossiter, 2009), anxiety (Swartz, 1990) and transient psychotic episodes (Gunderson, 1987) clients are at even greater risk from suicide - up to a rate of 45 per cent (Swartz, 1990). People with severe BPD have a survival rate of 50% over five years (Swartz, 1990), due to chronic suicidality (Zinkler, 2007) – resources for this diagnostic group need to be on par with other disorders with similar mortality, morbidity, disability and service usage (Krawitz, 1999).

BPD is a psychological condition that has slowly and insidiously developed over many years causing a great deal of distress and is diagnosed in adolescence or early adulthood. The longer it is untreated, the more chronic it becomes, interfering with the person's ability for enjoyment and fulfilment with work, study and relationships (bpd about, 2010). When left untreated, some research

has shown that in severe cases, half will suicide in the first five years (Swartz, 1990). Others lead lives of torment through isolation, rejection, self-blame, depression and high anxiety - often turning to drug and alcohol abuse trying to rid themselves of these negative emotions. This leads to other health issues requiring treatment.

Medications commonly used to treat people with BPD include antidepressants, mood stabilizers, anxiolytics (anti-anxiety), and at times antipsychotics. Medications are more likely to be effective when used in conjunction with psychotherapy (bpd about, 2010).

When looking at the above symptoms, it is understandable that BPD is one of the most distressing disorders a person could be diagnosed with. This in turn becomes one of the most challenging for clinicians to treat (Krawitz, 1999).

Issues for Clinicians

Clients diagnosed with BPD are known to utilize mental health services at a greater rate than people with other mental illnesses (with the exception of schizophrenia), this includes inpatient units (20%) and community services (10%) (Swartz, 1990; Krawitz, 1999; Linehan, 2006). They tend to be difficult to engage and to treat because of the complexity of their problems and conventional approaches to treatment often, unintentionally, reinforce maladaptive behaviours (Gunderson, 1987). Due to the many pressing issues that clients' with BPD present with, it can be overwhelming for the clinician to know what to deal with first (Krawitz, 1999). Therefore, attempting to deal with all the issues presented by the client and still have some time to teach the client more effective behaviours, is impossible for the clinician to fit into a therapy session (Rossiter, 2008; Sanderson, 2003-2008). Clinicians working with BPD report that treatment doesn't work, which results in feelings of demoralisation for the clinicians. (Rossiter, 2008). Also, there are increased levels of burnout when working with more severe forms of BPD (Rossiter, 2008).

Many clinicians are reluctant to work with this client group due to a number of factors:

- Lack of understanding about the aetiology of the disorder. (Krawitz, 1999)
- Lack of training and clinical supervision when treating clients with BPD. (Krawitz, 1999; Rossiter, 2009)
- Intense transference and counter-transference issues - clinicians can experience the same intense emotions as their clients especially anger and anxiety in response to repeated crises (Rossiter, 2008)
- Difficulty in dealing with clients who elicit care or assistance through suicidal and self harm gestures and are perceived to be in control of these behaviours, but can also be at increased risk of death by suicide (Rossiter, 2008)
- The stigma attached to the client can also be experienced by the clinician who is working to assist that client. (Rossiter, 2008)

Extreme responses by clinicians add to the possibility of burnout, such as becoming over-involved and wanting to 'rescue' the client. On the other hand, by remaining distant and under-involved, the clinician feels more able to cope with the client's behaviour. This leads to ineffective treatment and all of these factors can lead to clinician burnout. In addition, mental health services have staffing issues and most case-managers have a high caseload of 20-30 clients (Rossiter, 2008).

It has been highlighted a number of times in the literature that working in a DBT program has many benefits for clinicians and one very important benefit is the reduction of clinician burnout (Swenson, 2002; Rossiter, 2008).

Issues for the People with BPD

People with BPD live with the stigma that is associated with this diagnosis, having lived with shame and guilt, especially those who suffered childhood abuse. However, they are considered 'deviant' by the health professionals, who place blame on them believing they are in control of their behaviours. Stigma sets people apart and makes them inferior from what is accepted as 'normal' and is therefore discriminating of that person or people (stigma handout, 2010).

Any one given a diagnosis of personality disorder is viewed as in control, manipulative, attention seeking and hence, annoying – thus this diagnosis is a pejorative judgement rather than a clinical diagnosis (Lewis, 1988). BPD is a label many do not wish to be given due to these reasons. In some places the assessor is seen as a 'hero' when able to divert someone with this diagnosis, from being admitted to the service (Krawitz, 1999). Therefore, clients with BPD who have many issues but are perceived to be in control of their situation (Rossiter, 2008), are going to have difficulty being seen by the services (Rossiter, 2009). People diagnosed with BPD, often describe their experiences of mental health care before DBT as negative – that they have not been understood and have been badly and disrespectfully treated (Perseus, 2003).

These clients often feel rejected by the helping professions and ultimately this leads to irregular attendance to therapy – only turning up when they are feeling suicidal or in some crisis. This usually leads to an admission to an acute inpatient unit, which is not therapeutic for the client (Krawitz, 1999). This is symptom responsive or reactive treatment, rather than treatment planning (Krawitz, 1999).

It has often been said that people with BPD are not 'core business' (Rossiter, 2008) for mental health services. Clinician attitudes towards these people are perceived as disparaging, belittling and undervaluing, which only makes worse their situation (Hazelton, 2006) and reduces chances of client recovery (Krawitz, 2007). Hence, 'assertive disengagement' has become treatment as usual (TAU) for people with BPD due to clinician attitudes toward this diagnosis (Rossiter, 2008).

Dialectical Behaviour Therapy (DBT)

Over the last 15 years there have been a number of peer-reviewed studies completed on the efficacy of DBT for BPD. In 1991, when the first randomised control trial (RCT) of the effectiveness of this therapy was reported, it was met with much enthusiasm (Linehan, 2006). The American Psychiatric Association guidelines recommend that DBT is a specific treatment for BPD and to date there have been a number of RCT or efficacy studies completed internationally. In Australasia, there have now been three studies completed, one completed in NZ in 2001 with 10 participants (Brassington & Krawitz 2006) and two in Australia – one with 11 participants in a Queensland metropolitan area (Prendergast & McCausland 2007), and the other being a case study in a regional centre of N.S.W. (Rossiter & Black 2009).

DBT is a process that allows natural tensions or paradoxes that arise to be resolved and a synthesis reached. The main dialectical tension for the clinician is the need to validate the client whilst at the same time helping them to move

towards change through active problem solving. Clients too are encouraged to accept themselves whilst at the same time focus on changing behaviours (Rossiter, 2009). Facilitating behaviour change is a vital component of this program (Rossiter, 2009) and therapy is divided into four phases which follows a pre-treatment/commitment phase:

- Stage 1 Skills acquisition and strengthening (12-18 months)
- Stage 2 Processing of trauma related issues
- Stage 3 Self-respect and life goals
- Stage 4 Sense of connectedness (spiritual fulfilment) (Linehan, 1993a)

The aim of Stage One is to teach people new life skills and behaviours, without focusing on the trauma. The skills learnt by participants in Stage One are:

1. Core Mindfulness/States of Mind; (from Buddhist meditation, but psychological not religious) learn techniques that enable the client to tap into their 'wise-mind' through an increased awareness, focus and acceptance.
2. Distress Tolerance; learning techniques for tolerating painful events and emotions when you cannot make things better right away (crisis survival strategies)
3. Emotion Regulation; ways of changing distressing emotional states
4. Interpersonal Effectiveness taught effective ways of achieving one's objectives with other people: effective asking, taken seriously when say 'no', to maintain relationships and self-esteem when interacting with others.

Learning to tolerate distress, regulate emotions and developing better interpersonal effectiveness, are key skills desperately needed by this diagnostic group to be able to move-on and create a 'life worth living'. Threaded throughout these skills is the 'mindfulness', which is a form of meditation based on Zen Buddhism, teaching them how to stay in the 'now'. The result of this is the realization that an extreme emotional state can be 'sat in' and watched as it passes without having to react with some irrational behaviour. This is an experience of great achievement for many of these people whilst going through the DBT process (Rossiter, 2008).

As per Linehan's program recommendations, standard DBT comprises:

- individual therapy (60-90 minutes per week),
- group skills training (120-150 minutes per week; 2 trainers, 6-9 patients),
- crisis telephone coaching (available 24 hours per day); and
- consultation meeting for therapists (60-90 minutes per week).

A key component of DBT is support and supervision for the therapist which occurs at weekly consult meetings (Rossiter, 2009) and provides a growing understanding of the disorder and a framework for clinicians (Rossiter, 2008). This support and supervision aids the reduction of possible clinician burn-out, where the treatment being provided is clear, 'do-able' and effective (Swenson, 2002;Brassington, 2006). The more effective a clinician is at helping the client learn better life and coping skills, the more the client becomes involved with helping themselves to live a better life (Rossiter, 2009). This means the client is taking responsibility for themselves and their own safety allowing clinicians to step back from this responsibility and more likely to result in treatment maintenance post program.

DBT is a credible option for the public mental health system (Brassington, 2006; Krawitz, 1999). This method can be quickly implemented, as most clinicians already have an armoury of skills and experience with counselling (cognitive behaviour therapy - CBT or other), so with training in DBT and the aid of the DBT Skills Manual, staff can be trained as a DBT therapist in a small amount of time and at modest cost to the service (Krawitz, 1999). Also it can be effectively practiced by a wide range of clinicians with different professional backgrounds (Swenson, 2000; Brassington, 2006; Hawkins, 1998). There is growing evidence that DBT is effective with a number of other disorders, being: suicidal adolescents (The Mental Health Center of Greater Manchester, 1998; Robins, 2004), eating disorders, bulimia nervosa (Robins, 2004; Palmer, 2003), justice system inmates (Nee, 2007), depressed elderly and adults with attention deficit and hyperactivity disorder (Robins, 2004).

From www.bpd.about.com suggest that DBT has grown a large evidence base with documented success rates and is therefore considered one of the best treatments for BPD. Other treatments are said to be effective for the treatment of BPD, however to date there is very little evidence/research published, these are: schema focused therapy (one study published), mentalization (one study published), transference focused therapy (one RCT – however patients in the transference focused therapy group received more individual therapy than those in the DBT group). More research is needed to examine the effectiveness of these other treatments.

Outcomes for DBT

The prognosis for people diagnosed with BPD is far better than previously thought (Krawitz, 2007). Although these studies have used different measures, self-harm, suicidal thinking and behaviour are significantly reduced (Linehan, 2006; Alper, 2001; Stanley, 2007; Zinkler, 2007; Koons, 2001); the medical severity of self-harm is reduced (Verheul, 2003; Prendergast, 2007; Linehan, 2006); depression, anxiety and feelings of hopelessness are reduced (Stanley, 2007; Koons, 2001; Prendergast, 2007); the need to be taken to an in-patient acute unit is reduced (The Mental Health Center of Greater Manchester, 1998; Gabbard, 1997; Sambrook, 2006; Prendergast, 2007; Zinkler, 2007; Linehan, 2006) and contact with a community mental health service is also reduced (The Mental Health Center of Greater Manchester, 1998; Sambrook, 2006; Prendergast, 2007). Many DBT participants describe symptoms like depression and anxiety are radically decreased after entering treatment (Perseus, 2003). One study reported DBT as superior for dealing with BPD, especially when complicated with substance abuse (Kienast, 2008; Verheul, 2003; Linehan, 2006). Another benefit shown from the literature is that after hours crisis calls, emergency department visits (Linehan, 2006), police intervention and need for ambulance are all reduced (Rossiter, 2009). Patients experience a better quality of life (Sambrook, 2006; Prendergast, 2007) with a sense of achievement and success, through a program that engages and validates them. Some studies have shown almost 75% of participants no longer met criteria for BPD 5-6 years after completing a DBT program (Krawitz, 2007). Another study indicated that after 12 months of DBT, clients had improved considerably and decided that Community Mental Health Teams could not offer them much more (Zinkler, 2007).

Clinicians also gain a sense of hope (Krawitz, 2007), competency and success leading to reduced burn-out, when working with a previously perceived difficult client group. One study indicated that clinician satisfaction is perceived as high and had no difficulty with clinician retention when working with the DBT format (Zinkler, 2007). All this leads to a cost saving to the service, specifically through a

reduction in hospital admissions and contacts with community staff (The Mental Health Center of Greater Manchester, 1998). Another saving that is important to consider is the reduction in work impairment of the client (Gabbard, 1997; The Mental Health Center of Greater Manchester, 1998).

An Australian study identified the lack of evidence-based therapeutic services available to women with a BPD diagnosis and the strain this caused on services. This led to collaboration between the mental health team and the women's health clinic and a DBT program was then developed for the area. This six month study found significant reductions in the severity of self-harm incidents; the number and length of hospital stays decreased by over 33 percent (62 days down to 19); a decrease in phone and face-to-face contact in community clinics; and specifically the Global Assessment of Functioning (GAF) scores indicated significant improvement. Therefore, not only did the service have cost saving with reduced contacts and admissions, but the client experiences a better quality of life and functioning (Prendergast, 2007).

Retention Rates to DBT Treatment

Treatment as usual (TAU) mostly in the form of CBT can be difficult for people with BPD to cope with, as CBT requires the patient to constantly focus on behaviour change, which can have been found to be invalidating (Sanderson, 2003-2008). Although DBT is focused on behaviour change, the other aspects of the DBT format leads to a more validating process and is more likely to retain clients to treatment (Swenson, 2000; Robins, 2004; Sambrook, 2006; Palmer, 2003). Particularly through the group process, clients gain life skills that improve quality of life and validation through other people experiencing similar symptoms and emotional difficulties (Perseius, 2003). Perseius et al (2003, p.223) notes from client interviews "I felt very lonely in my suffering, but in the group I felt-my god, here's a bunch of people that all struggle like I do, just to survive another day". This is something the TAU with individual counselling cannot offer and is another reason why participants are more likely to remain in therapy (Linehan, 2006). Some studies have shown extremely high, even 100% retention to treatment (Brassington, 2006; Verheul, 2003; Stanley, 2007). One would have to believe that the great respect, understanding and confirmation the participants have experienced from the DBT-therapists is a huge factor in remaining in therapy. For some participants this is the first time in many years of contact with mental health services that they have encountered this (Perseius, 2003).

Cost Effectiveness of DBT

Cost saving for the service providers is supported by evidence in the literature, including reduction in admissions to hospital and contacts to community mental health services (Linehan, 2006; Krawitz, 1999; Gabbard, 1997; The Mental Health Center of Greater Manchester, 1998). Also, as previously mentioned, there is cost saving in the reduced contacts with afterhours crisis calls, ED (Linehan, 2006; Rossiter, 2009), ambulance and police (Rossiter, 2009). Cost savings are likely to be in the range of US\$10K to US\$26K per client per year (Krawitz, 1999; The Mental Health Center of Greater Manchester, 1998).

The cost of clinician 'burnout' is often not considered, but is critical to the sustainability of services. Some common physical and emotional symptoms experienced with burnout are exhaustion, anger, muscle pain, headache, respiratory illness, gastrointestinal illness, hypertension and depression (cited by Felton from a survey undertaken by Northwestern National Life of

Minneapolis. 1998. p.238). The main suggestions for diminishing burnout is: allowing greater control of individual jobs; encouraging further education of employees; and including a sense of 'spirituality' in the form of morality, ethics, shared values and beliefs (Felton, 1998). The DBT program provides this in the form of empowering clinicians through a framework of effective treatment; ongoing education and support; and 'spirituality' issues/needs.

Changed Staff Attitudes

Staff attitude is a major issue for the therapeutic engagement of people with BPD and previous research indicates improved staff attitudes with staff training (Rossiter, 2008). Working within the DBT program also continues to improve the attitude of staff towards people diagnosed with this disorder as the consult group provides ongoing education (Hazelton, 2006).

In an Australian study of 94 staff participating in a two day workshop on DBT, the pre- and post- focus group interviews indicated significant changes of their attitudes – shifting from pessimism that 'nothing works', to a greater understanding and optimism (Hazelton, 2006).

Other research has shown superior results with staff training, when a client previously diagnosed with BPD, who has successfully completed a DBT program – co-facilitates the training of staff on BPD and the results of treatment. In this situation, staff gain greater insight as they actually see the results of an effective treatment first hand and hear how clients are grossly misunderstood through the lack of staff understanding (Krawitz, 2007).

2. Implications

Strengths

This study indicates that Dialectical Behaviour Therapy (DBT) is effective and can be utilised in an everyday clinical setting of a rural public mental health service. The statistically significant results of this study have replicated results in the literature, with improvement for the clients' mental state and a reduction in contacts to the service. The strength of this study is that these were achieved in the real world clinical setting of a public mental health service and are as effective as the larger studies and the random controlled trials already published. This program has been successfully facilitated with significant results within existing health service resources.

Changing the structure of the original program (by Linehan) is often viewed as a limitation, however as this is a public mental health setting; the change in structure was a necessity to fit with available resources. As this study has shown clinically significant results, the change in structure has had no negative effect on clinical outcomes. These changes are explained in the 'Approach' section under – 'Method – Program Structure'. Structural changes included after hours phone coaching not done by clinician, less frequent consult group and no dedicated DBT therapists.

There is clinically significant improvement in the client post DBT, shown by a dramatic reduction of days in hospital. The clients had a 95 percent decrease in hospital days as the length of stay (LOS) days for Bloomfield hospital dropped

to just over a day (1.14 days) in the 12 months post treatment compared to over 3 weeks (22.5 days) in the 12 months pre treatment ($p=0.011$).

The client contacts to community mental health have also reduced in the 12 month post treatment, also showing clinically significant improvement. These have reduced from 39 in the 12 months pre DBT to 15.5 in the 12 months post DBT ($p<0.001$). Other studies have indicated similar reductions in contact to the community mental health service post treatment (The Mental Health Center of Greater Manchester, 1998; Prendergast, 2007).

Also, there is evidence that contacts with other services are reduced post DBT. Presentations to the emergency department went from a mean of 1 in the 12 months pre DBT to a mean of 0.2 in the 12 months post treatment ($p=0.06$) (Linehan, 2006).

Significant clinical relevance is also indicated by the mean Depression, Anxiety and Stress Scores (DASS) and the Self Harm Inventory (SHI):

1. Depression has reduced from severe (21) to mild (12) (Linehan, 2006; Brassington, 2006); this result is similar to Brassington's study showing depression and anxiety reducing from 'severe' to 'not clinically significant' (MCMI-111). Prendergast also states that her clients depression scores went from 'severe' to 'minimal', 'mild' or 'moderate', (BDI) with mean score pre treatment being 36.18 reducing to mean score of 26.27 post treatment ($p=0.01$).
2. Anxiety has reduced from severe (15.9) to mild (7.6) ($p=0.00$) (Brassington, 2006).
3. Stress has reduced from moderate (24.4) to normal (14.1) ($p=0.00$).
4. Self harm has also significantly reduced – from 18.7 to 11.4 ($p=0.01$), adding to the clinical relevance. Again this is in line with findings from other studies, even when different measures are used in many of the studies, the trend has been the same for all - a reduction in self harm behaviour (Linehan, 2006; Verheul, 2003).

As all four scores show a significant reduction post-DBT, it is likely the participants have experienced an improvement in their quality of life.

This program offers clinicians a way to engage and to treat this difficult client group, with clinically relevant and significant results from an evidence based treatment program. The clinicians also have good support through the consult group which provides education and clinical supervision. Palmer argues that one of the major strengths of DBT is the supportive framework it supplies for both clinicians and clients alike (Palmer, 2003).

The DBT program is set out in a manual or book; therefore staff from different professional backgrounds can be easily trained as clinicians to be involved in the local program.

Cost saving for this service has been created through the DBT program. The reduction in the Bloomfield length of stay (LOS) days represents a cost saving for the service of \$8,517 per person for the 12 months post DBT compared to the 12 months pre DBT. The total cost saving, including hospital admissions and community contacts is \$10,277 per person. Other studies have noted similar savings (Krawitz, 1999; The Mental Health Center of Greater Manchester, 1998).

Early intervention (youth programs) are likely to enhance greater savings for the service/s – clients get well earlier with many years of treatment no longer

required. Early and appropriate intervention is a recommendation for this client group by the Senate Standing Committee on Community Affairs (2008).

During the past 10 to 15 years, early intervention has been a priority for service delivery for most mental health disorders and should also apply to those suffering with BPD. Evidence demonstrates early intervention and appropriate treatment prevents sufferers of BPD becoming chronic (leading them to be high users of the services, carrying a high suicide risk and learning ineffective coping behaviours). To treat people appropriately and early will ensure they are able to live a more fulfilled life with more satisfying relationships (Krawitz, 1999) and the possibility of making a contribution through some form of work. This translates to less contact or even no contact with the health service post DBT. The Senate Standing Committee on Community Affairs (2008) report states that early intervention should be made a priority for people diagnosed with BPD (Senate Community Affairs Committee Secretariat, 2008).

Also, the sooner this client group are given treatment, the impact on their children will be minimised (Senate Community Affairs Committee Secretariat, 2008), – for example: not witnessing acts of self-harm or being exposed to the rage and substance abuse these people are prone to when left untreated. A study by Weiss et al. (1996), cited in <http://www.bpdfamily.com> (*Children of Mothers with Borderline Personality Disorder*), stated that these children had a “significantly higher number of psychiatric diagnoses and scored higher on a global rating of impairment”. This would translate into a second generation of consumers needing treatment from mental health or other services – possibly leading to more diagnosis of BPD. Early intervention is the only solution and needs to be given priority within the mental health service.

As an extension of the rural program being evaluated in this study, an early intervention program has already commenced, with the DBT program being made available to 14 – 24 year olds. These young people are not old enough to have a formal diagnosis of BPD; however their behaviour and symptoms are starting to become apparent – most commonly with depression and self-harm behaviours. Some are starting to use drugs and alcohol, considered by many to be a form of self-medication attempting to stop the emotional pain and misery they generally experience (Paris, 1992).

When looking at the prevalence of BPD – one per cent of the general population indicates that there could be 380 people in Orange suffering with this disorder. Potentially this could be 760 people if the prevalence rates are at two percent and yet only 31 people have been referred to the program to date. This indicates potential for improvement in diagnosis and referral rates within Orange Local Government Area (LGA).

The mean length of time to complete Stage One of the DBT program was 22 months, compared to the mean time of those that did not complete – which was 6.5 months. The mean time for the group to be on program was 15.2 months. The 22 months to complete Stage One is longer than the suggested 12-18 months recommended in the original author’s model (Linehan). However, the longer term has not affected the results for the participants; however it does raise the question ‘How long should a client participate in the program to see clinically relevant change in symptoms?’

Although this represents a longer term on program, some studies have suggested that participants of their program may continue in a weekly transition group for a further 12 months, to assist in becoming independent from the system of care, as in the New Hampshire study. They also, introduced a self-help group for graduates – graduate leaders run the group supported by program staff (The Mental Health Center of Greater Manchester, 1998).

The rural DBT program being evaluated in this study is consistent with policy and practise recommended by the Senate Standing Committee on Community Affairs (2008). Program components included assessment, therapy, teaching, clinical supervision and research (Senate Community Affairs Committee Secretariat, 2008).

This evaluation of the DBT program has been an important opportunity to identify areas for improvement with this program to ensure that our service to the mentally ill is best practise. The dissemination of results from this evaluation will assist other rural health workers on how best to work with this very challenging client.

Recommendations

Some areas within the mental health system say they do not deal with BPD; however it is inevitable that all areas encounter this client group. Therefore it would be seen as reasonable to have staff trained in DBT in all areas of mental health service. If some areas are seen to be the more appropriate place to work with this client group, then managers should support more staff in those areas to be trained and work in the already successful DBT program.

A one day workshop on the basics of DBT is offered to staff two or three times per year by the program facilitator through the Rural and Remote Education program. This needs to be promoted to staff as exposure to new ideas and ways of working with this difficult client group is a way to enhance clinical services for clients with BPD. This is an option that the Hunter New England Area Health Service offers their staff as a part of their ongoing training calendar, however their program is aimed more at teaching how to be a DBT clinician (over two days). Mandatory workshops for new graduates on 'personality disorders' are also conducted in the HNEAHS and could be readily adapted for the GWAHS context.

Regular staff education about BPD, available treatments and effectiveness would most likely lead to better services for this client group and less difficulty (burnout) for staff when working with them.

3. Approach

Research Question/Aim

The aim was to perform an effectiveness study, retrospectively looking at the results of patients who have participated in Stage One of a DBT program, set in a rural area of NSW, Australia. Does this research determine if participation in a DBT program is successful in terms of leading to:

- a significant decrease in: admissions to hospital;
- a significant decrease in: occasions of self harm/suicidal behaviours;
- a significant decrease in: occasions of service with mental health team clinician;
- an improved quality of life for the client, and;
- a cost saving to the health service.

Sampling

Ethics approval was obtained and then the case-managers invited participants to speak to a researcher. Interested participants were sent a copy of the Patient Information Statement and the Patient Consent form. Participants were offered to meet with a member of the research team, to go through the information and to answer any questions. There were 20 people approached and 18 agreed to participate in the study. The DBT program had received 31 referrals over six years and 27 of those had participated in the program, however some had moved away from the area and their addresses were unknown and others had not completed more than the baseline measure. In this analysis we have reported on 16 as there were two exclusions.

Sources of Data

File audit - assessing the 12 months before participation in the DBT program (PRE) and comparing it to the 12 months after participation in the DBT program (POST). This also enabled the collection of demographics and:

- Occasions of self-harm/suicidal behaviours
- Admissions to a psychiatric hospital and/or Emergency Department.
- Occasions of service from the community mental health teams.
- Using this information cost to the health service was derived using 'cost per day' for hospital admissions and multiplied by the number of days for each admission; and 'cost per contact' for community contacts and multiplied by the number of contacts. The study looked at de-identified data from the files of the consenting participants.

Measures - data was obtained and analysed from two assessment scales which were completed at baseline and at approximately three monthly intervals during the program. The assessment scales were:

- The Depression and Anxiety Symptom Scale (DASS) – 42 questions measuring the negative emotional states of depression, anxiety and stress experienced by the participant. Each scale contains 14 items. (See Appendix A - participant questionnaire of the DASS)
- The Self Harm Inventory (SHI) – see Appendix B. This is not a validated instrument; however, the data obtained has value, and as a retrospective study data sources were restricted to the existing dataset. This inventory has 11 questions each with two parts and asks the participant to rate the frequency and intensity as minimal, moderate or severe. The areas of self-

harm measured are: 'physical self mutilation', 'over medication', 'illegal substances', 'alcohol', 'excessive exercise', 'binging/purging/restricting', 'neglect of personal care', 'risk taking behaviours', 'gambling', 'excessive shopping/purchasing', and 'isolating'.

Of the 18 participants, nine had completed Stage One of DBT, another seven had participated for a number of months, having completed a baseline measure and at least one further measure. Two needed to be excluded; one having a missing baseline measure and the other being a true outlier, leaving 16 for this analysis.

The participants in the study are effectively their own control group - using pre-treatment scores compared to post-treatment scores. A biostatistician at the Department of Health - Head Office in Sydney assisted with the scoring of these measures and Dr Helen Stain from the Centre for Rural and Remote Mental Health monitored this study as the Mentor and Research Supervisor.

Method – Program Structure

The Rural program being evaluated here has been modified slightly to fit with services already available through the public mental health service.

- The phone coaching by the clinician is only available during work hours – then the client utilises the afterhours 1800# (the 1800 staff have had DBT training on phone coaching to work with these clients).
- The clinician consult meetings are only 60 minutes each fortnight instead of the recommended weekly session.
- As the program is offered as part of a public community mental health service or real world setting where clinicians also fulfill other roles (not dedicated DBT therapists), the program has needed to be adapted to the resources available. This is mainly due to the fact that the treatment is not widely known or understood within the service.

However, the individual therapy and the group skills are as per the standard DBT recommendations.

This rural program needs to take regular breaks in the skills training sessions, which is said to benefit facilitators and clients. The clients give feedback that this enhances commitment as they learn the value of the skills by practicing them during breaks.

For clients severely affected by this disorder it is necessary to be 'flexible' in how to set boundaries for participation. There are boundaries regarding participation in the program: clients are expected to do each module at least once and at the most - twice. Also, if four consecutive sessions are missed clients are considered 'out of therapy' and have to take a six month break and are re-assessed before starting in the program again.

Analysis Technique

Paired t-tests were used to test for differences in pre and post DASS and SHI scores.

Differences in: community contacts (face to face and phone); occasions of self-harm (OOSH); admissions (acute hospital unit or ED) and length of stay (LOS), were tested by fitting Poisson regression models using the method of Generalised Estimating Equations (GEE) with an exchangeable correlation matrix to adjust for correlation between outcomes within patients. All outcomes were modelled separately, and counts for patients were offset in models by the

log of their number of months of follow-up, so that models were essentially modelling change in rates pre and post-DBT. An advantage of using Poisson regression is that the difference in rates from pre to post-DBT can be interpreted as a ratio of rates.

All tests were done by DBT completion status (i.e. Stage One completed or not completed), and for the full sample.

Limitations

The study only had a sample size of 16 and therefore had low statistical power. However, this is similar to other studies completed in the Australasian region and based on the time required to engage and then to treat someone diagnosed with BPD, it will continue to be difficult to have a larger study, especially in rural areas.

Being a 'pre/post' study, rather than something more rigorous has also reduced the statistical power.

File audits will always be limited the accuracy, reliability and comprehensiveness of clinician recordings. It is difficult for a clinician to know exactly what the client has done or been through in the past fortnight or month, from discussions that take only one hour. Also, the client may not be willing to tell the clinician everything, even when asked.

The main difficulty experienced with this file audit was that clinician knowledge of a chronic substance abuser meant that clinicians did not reliably record substance use details regularly for that client. Also, for the few clients in a residential program, there were some difficulties in interpreting file entries. For example: determining whether the session was focussed on borderline personality symptoms or Activities of Daily Living (ADL).

Self report measures also have limitations such as whether the measure was completed in front of the clinician or group facilitator. There is the likelihood of over or underreporting of symptoms depending on the self perception and needs of the client. The DASS was generally completed well, with little missing data. However, on the SHI some of the questions were left blank. The program facilitator reported that this was interpreted as a non endorsement or occurrence of such types of self harm. There were two parts to each question – frequency and intensity. At times, only one part of the question had been answered.

Information on pharmacotherapy for participants was not collected or analysed in this study.

Management Support

Management were supportive for this evaluation process to occur and have provided all that has been required, to complete the study. This included attending all the workshops with the Rural Research Capacity Building Program (RRCBP) and attending two conferences where the outcomes have been presented. Being a part-time clinician made it easy for this to occur, as this meant that backfill days did not have to be arranged.

A full copy of the 1:3:25 report will be provided to The Greater Western Human Research Ethics Committee (Project No. GW 2007/28), the NSW Institute of Rural Clinical Services and Teaching (IRCST), The Greater Western – Eastern Cluster – Director of Mental Health Nursing and the Executive Committee of

Mental Health Services (Eastern Cluster). It is expected that the 1 page and the 3 page report will be disseminated to appropriate managers and clinicians. Included in this group would be clinicians and support workers with Alcohol and Other Drugs (A&OD), Community Health (Primary Care) and the MERIT program, as all departments that work with people with complex and difficult behaviours, need to be aware of a program that offers a framework for employees to work in. They also need to be aware that this framework is supportive of clinicians (reducing burnout) and of the participant (behaviour change through validation). Also, as there is often a cross-over of case-management of clients with BPD with mental health, Community Health (particularly Social Workers) and A&OD, it would be appropriate for the different departments to be aware of this program and work together within it. Working with one framework or program means one language between the different clinicians (ie nurses, social workers, occupational therapists, psychologists).

4. Results

Demographics

From a sample of 18, two were excluded - an outlier who experienced some very stressful life events that no other client experienced - causing an increase of symptomology whilst on program; and a participant with no baseline measure leaving 16 participants in the current sample. The 16 participants in this study were all female, which is consistent with the literature indicating that BPD is predominantly a female disorder (75%) (Swartz, 1990; Paris, 1992).

Table 1: Descriptive characteristics of the DBT program sample

Characteristic	DBT Complete	DBT Incomplete	Total
	N (%)	N (%)	N (%)
Age - mean (SD)	32.2 (5.7)	34.1 (6.9)	33.1 (6.3)
Sex			
Male	0 (0.0)	0 (0.0)	0 (0.0)
Female	9 (100.0)	7 (100.0)	16 (100.0)
Marital status			
Married	2 (22.2)	6 (85.7)	8 (50.0)
Other	7 (77.8)	1 (14.3)	8 (50.0)
Time on DBT - mean (SD)	22.0 (10.4)	6.5 (2.5)	15.2 (11.1)

SD = standard deviation

Depression, Anxiety, Stress and Self-Harm

The results of the assessment scales in Table 2 indicate statistically significant reductions in mean DASS scores in all three sub-scales for the full sample, as well as a reduction in SHI score. Although mean scores in sub-samples also showed reductions, the lack of power (due to small sample size) meant these were not always statistically significantly different. Mean SHI scores in the sub-sample 'DBT complete' show a statistically significant reduction ($p=0.028$).

Table 2: DASS and SHI scores by DBT completion status

Outcome	Pre-DBT		Post-DBT		Difference	
	Mean	SD	Mean	SD	T	P-Value
DBT Complete N = 9						
DASS - Depression	21.0	10.2	13.0	13.9	1.81	0.1078
DASS - Anxiety	14.6	7.7	6.7	5.1	2.97	0.0179
DASS - Stress	23.6	8.9	13.0	8.1	3.37	0.0098
SHI - Total	20.1	8.8	10.2	9.9	2.67	0.0284
DBT Incomplete N = 7						
DASS - Depression	21.0	10.5	10.7	10.9	2.28	0.0629
DASS - Anxiety	17.7	11.1	8.9	9.9	2.80	0.0312
DASS - Stress	25.4	11.5	15.4	11.8	2.38	0.0548
SHI - Total	16.9	11.8	13.0	12.3	1.15	0.2932
All N = 16						
DASS - Depression	21.0	10.0	12.0	12.4	2.92	0.0106
DASS - Anxiety	15.9	9.2	7.6	7.4	4.22	0.0007
DASS - Stress	24.4	9.8	14.1	9.6	4.20	0.0008
SHI - Total	18.7	10.0	11.4	10.7	2.81	0.0133

Table 3: The DASS score ranges:

Severity Ratings	Depression	Anxiety	Stress
Normal	0 – 9	0 – 7	0 - 14
Mild	10 – 13	8 – 9	15 – 18
Moderate	14 – 20	10 – 14	19 - 25
Severe	21 – 27	15 – 19	26 - 33
Extremely severe	28+	20+	34+

Table 2 and Figure 4 shows the statistically significant reductions in the mean scores of the DASS subscales: Depression ($p=0.011$), Anxiety ($p=0.001$) and Stress ($p=0.001$) and also the Self Harm Inventory (SHI) scores ($p=0.013$) – all for the full sample, from 12 months Pre to 12 months Post DBT.

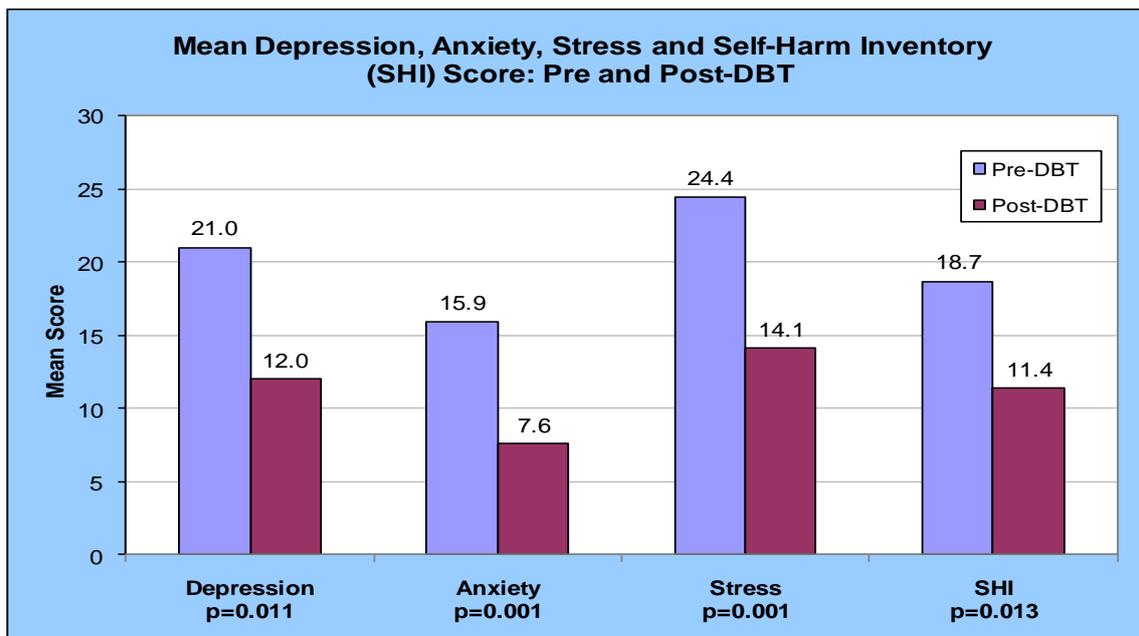


Figure 4: Chart showing mean scores for depression, anxiety, stress and SHI for pre and post DBT (The maximum score for each subscale of depression, anxiety and stress is 42 and the maximum score for SHI is 66).

Occasions of Service – Hospital and Community

Table 5: Community Contacts, Occasions of Self-harm, Admissions and Length of stay days for the 12 Months PRE and POST DBT

Outcome	Pre-DBT		Post-DBT		Difference		
	Mean	SD	Mean	SD	RR (95% CI)	Z	P-Value
All N = 16							
Telephone contacts	8.7	13.10	2.9	3.38	0.33 (0.16-0.70)	-2.90	0.004
Face-to-face contacts	30.2	15.85	12.7	11.43	0.42 (0.25-0.72)	-3.18	0.001
Total contacts	39.0	26.65	15.5	11.67	0.40 (0.25-0.66)	-3.63	<0.001
Occasions of self-harm behaviour	3.3	4.85	1.5	3.83	0.46 (0.19-1.11)	-1.72	0.085
ED admissions	1.0	1.96	0.2	0.44	0.21 (0.04-1.07)	-1.88	0.061
BLO admissions	1.2	1.57	0.2	0.38	0.12 (0.02-0.62)	-2.54	0.011
Total admissions	2.2	3.11	0.4	0.77	0.16 (0.04-0.62)	-2.65	0.008
LOS in BLO	18.8	44.58	5.7	16.80	0.30 (0.05-1.75)	-1.33	0.182

ED admissions = Emergency Department presentations at the general hospital
BLO = Bloomfield Psychiatric Hospital

Table 5 shows the mean rates for contacts (phone and face to face), occasions of self harm (OOSH), hospital admissions and length of stay days (LOS) for the total group. Rate ratios are shown for the change over time and statistically significant results are highlighted in bold. Because not all patients had been referred to and were with the service for a full 12 months prior to starting DBT, contact rates were calculated on a monthly basis and are reported as 12 monthly contact rates. Rates of occasions of self-harm and admissions are also reported as 12 monthly rates. However, complete (12 months) of pre and post-DBT follow-up data were not available for these outcomes. LOS are analysed and reported as days per 12 months. LOS days reduced from a mean of 18.8 days Pre-DBT to a mean of 5.7 days post-DBT, although this is not statistically significant, it still indicates a trend.

Statistically significant reductions can be seen in Table 4 for telephone ($p=0.004$), face-to-face ($p=0.001$) and total contacts ($p=<0.001$).

Number of admissions to Bloomfield and total admissions are also significantly reduced with admissions to Bloomfield dropping from a mean of 1.2 Pre-DBT to a mean of 0.2 Post-DBT ($p=0.011$). Total admissions dropped from a mean of 2.2 in the 12 months Pre-DBT to a mean of 0.4 in the 12 months Post-DBT ($p=0.008$).

Costs

Figure 6 shows mean costs of contacts with the community service and admissions to Bloomfield (BLO) hospital for the full sample. All community contacts were costed at \$161 per contact, and all admissions to Bloomfield hospital were costed at \$625 per day, which at the time was the average cost of these services. However, people with BPD are mostly admitted to the acute unit or to a rehabilitation unit. The acute unit costs \$880/bed/day and the rehabilitation units cost \$538/bed/day (NSW Health. Mental Health Performance Report, 2008). Therefore, if they are admitted to the acute unit, then costs will be much greater.

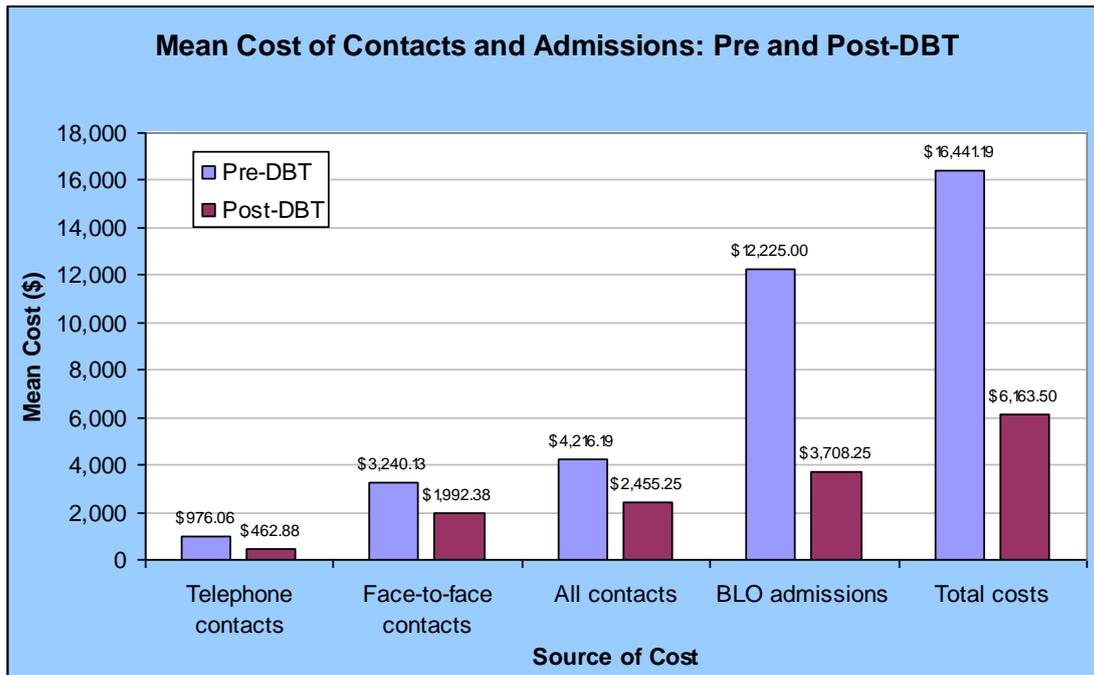


Figure 6: A reduction in costs to the service as a result of participation in DBT for those with BPD.

Figure 6 represents the substantial reductions in costs associated with community contacts and hospital admissions for the 12 months post-DBT, compared to the 12 months pre-DBT. A crude calculation based on the costs already mentioned, shows the sum total of contacts (community and hospital) has reduced to \$98,616.00 from \$263,059.00. This represents a saving of \$10,277 per person, for the 12 months post DBT compared to the 12 months pre DBT.

Participants Experience of DBT

Table 7: Comments from the Participants.

Experience from DBT	Number of Clients
More Control of Emotions	14
More Skills	11
More Confident	6
Better Relationships with Friends and Family	4
I'm More Accepting of Myself/Situation	4
More Control of Thoughts	3
Happiest I've Ever Been/Enjoying Life	3
Now has a Job	3
Improved Quality of Life	3

Table 7 represents the final comments received from the participants at the end of program and the number of clients that commented on specific themes that have enhanced their quality of life. The top two –‘more control of emotions’ and ‘more skills’, were reported twice as many times as the other themes, suggesting that these had the greatest impact on more participants.

See next page for two actual examples:

“I find it difficult to believe that I am the same person I was 18 months ago. I am not only able to hold down a job, but I am considered indispensable. My job is high pressure and high stress, yet instead of running from that situation I am enjoying it. My relationship with my husband is so much better as is my relationship with my family. I no longer have the extremes of emotion that I used to have. I am able to use skills without even thinking about them and even use them to help friends. I cannot thank the DBT team enough for helping me get my life back.”

Participant – completed DBT 2009

“DBT helped me with skills so that I can calm down, before I get too stressed. Helps me challenge the negative thoughts and try to put positive thoughts in my head instead. Helped me cope in a group situation – I’m less paranoid and more trusting. I’m able to step back from problems so they don’t overwhelm me. It generally made me feel better about myself, a sense of achievement in staying in the group. It’s given me an awareness of my problems and an understanding of my illness. DBT has validated my concerns that there was something wrong with me and has given me some answers. DBT reduces my isolation. DBT skills have given me other ways to cope instead of self-harming – particularly ‘distress tolerance’.”

Also, some of the clients from this rural DBT program who had many years on social benefits are now able to return to work on a part-time basis.

5. Further Research

As stated in much of the literature, there is little understood about BPD and its available treatments. Every peer reviewed study reports that more research is needed in this area of treatment use and as clients with BPD are high users of the service it is critical that it continues.

The managers and decision makers within our health system need to have a greater understanding about BPD, its treatment and the benefits for clients, staff and also the cost saving to the service. Hence, more information will inform service providers of better directions to move with this client group.

Staff attitudes (including managers) towards people diagnosed with BPD is an issue that needs exploring. This would be a possibility through the exposure of staff to training workshops, where an opportunity presents itself for performing validated surveys of staff attitudes towards this client group. This would give our leaders an insight into how best to manage the attitude of staff towards this client group aiming for successful outcomes for both staff and clients.

A number of other studies did not include follow-up data post treatment and therefore could not evaluate maintenance of treatment effect. The current study included the 12 months post treatment. The results of this study indicate statistically significant improvements in a number of areas (i.e.: reductions in depression, stress, anxiety and self-harm rates, also admissions and contacts with the service). Even so, the sample is small therefore the power of the study has limitations. However, to further evaluate these participants as to symptoms

and quality of life at two, three and four year's post DBT would provide interesting information as to the longevity of treatment effect.

As yet there is no Australian RCT testing the effectiveness of DBT. With the implementation of the 14 to 24 year old DBT program, considered to be early intervention – it would be advantageous to continue with data collection, analysis and evaluation, to gain results from this different application. Also, to continue to look at the most effective ways of implementing DBT in the public mental health arena is also important.

Questions that still need to be asked

1. What do Managers and Administrators understand about BPD, its available treatments and cost saving to the service?
2. What are the attitude of staff towards this client group and their understanding of available treatments for BPD?
3. Why is it taking so long to roll out this program when the evidence indicates significant reduction in client disability and their contacts with the service?
4. Should BPD treatments be taught to mental health nurses and allied health professionals at university?
5. What does the DBT program cost to run (e.g.: how often is the client accessing the service during the program)?
6. Survey the clinicians to assess benefits of the program for them. Does this rural DBT program assist in reducing burn-out of clinicians?
7. How many of the 20-30 clients (per staff member) case managed in the community have borderline traits and are difficult to engage? need for accurate assessment?
8. Does being married create more difficulty staying in the program due to relationship issues; or is there more support from their relationship and they do not need to stay on program; or do they have less symptomology and therefore did not need to stay on program.
9. The singles that completed DBT – were they of higher need; more symptomatic; more relationship troubles; and/or less supported elsewhere?
10. The longer term of 22 months on program has not affected the results for the participants; however it does raise the question of: how long is needed for a change in symptoms?
11. Does early intervention reduce time required on program, due to less therapy interfering behaviours?

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6. Appendix:

Additional Resources

Centre for Psychotherapy, Newcastle, Australia.

Provides a specialist, outpatient, assessment and treatment service for people diagnosed with BPD and those with Eating Disorder.

Internet Sites

1. Spectrum Program, Victoria, Australia
www.spectrumbpd.com.au
2. American Self-Harm Information clearing house
<http://www.selfinjury.org>
User-friendly information about self-harm, understanding self harm and strategies to help cope with urges.
3. The Borderline Sanctuary
<http://www.mhsanctuary.com/borderline>
Supportive and hopeful testimony by/for borderline patients.
4. BPD Central
<http://www.bpdcentral.com>
By Krieger and Mason (authors of 'Stop Walking on Eggshells') balances facts and compassion.
5. Hope Allianz...Counselling and Healing Centre
<http://www.hopeallianz.com>
The Resource Centre has information on a range of Dialectical Behaviour Therapy skills including Mindfulness, Distress tolerance, Emotion Regulation, and Interpersonal effectiveness as well as issues such as grief and loss and supports for families.
6. The Shack
<http://www.mjtacc.com>
The first Australian web site that offers information, resources and message boards in a safe and friendly environment. The message boards are there for you to discuss your issues with others suffering from or caring for someone with this disorder.
7. Soul's Self-Help Central
<http://www.soulselfhelp.on.ca> (then click on 'borderline personality disorder – at left of screen')
Supportive and helpful testimonials and email support groups.
8. Marsha Linehan's website – the author of DBT
www.behavioraltech.org
9. For Family information about BPD (incl. Children of BPD)
<http://www.bpdfamily.com>

Books

1. Kreger, R. 1998, **Stop Walking on Eggshells: Taking Your Life Back When someone You Care About Has Borderline Personality Disorder**, New Harbinger Publications, Oakland, CA ISBN: 157224108X
2. Santoro, J. 1997, **The Angry Heart, Overcoming Borderline and Addictive Disorders: An Interactive Self Help Guide**, New Harbinger Publications, Oakland CA.
3. Richard, A. Moskowitz, M.D. 2001. **Lost in the Mirror: An Inside look at Borderline Personality Disorder**. 2nd Ed. Taylor Publishing, Lanham, USA.
4. Kreisman, J. Strauss, J.H. 1989. **I Hate You – Don't Leave Me**. Body Press, L.A.
5. McKay, M. Wood, J.C. Brantley, J. 2007. **The Dialectical Behavior Therapy Skills Workbook**. New Harbinger Publications, Oakland, CA.
6. **New Hope for People with "BPD"** best book for consumers and families.
7. **Don't Let Your Emotions run Your Life: How DBT can put you in control**
8. **"BPD": The Latest Assessment and Treatment Strategies**. For Clinicians

The following book list represents only some of the recommended reading from the Marsha Linehan's website - www.behavioraltech.org

Dialectics

1. Basseches, M. (1985). **Dialectical Thinking and Adult Development**. St. Louis, MO: Ablex Publishing Corp.
2. Levins, R. & Lewontin, R. (1987). **The Dialectical Biologist**. Cambridge, MA: Harvard University Press.

Mindfulness

1. Aitken, R. (1994). **Encouraging Words : Zen Buddhist teachings for Western Students**. New York: Pantheon Books
2. Aitken, R. (1985). **Taking the Path of Zen**. New York: North Point Press.
3. DeMello, A. (1984). **The Song of the Bird**. New York: Image Press.
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5. Kabat-Zinn, J. (1995). **Wherever You Go, There You Are**. New York: Hyperion Books.
6. Hahn, T. N. (1999). **The Miracle of Mindfulness**. Boston, MA: Beacon Press.
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DASS

Name:

Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree, or a good part of time
- 3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Reminder of rating scale:

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree, or a good part of time
- 3 Applied to me very much, or most of the time

22	I found it hard to wind down	0	1	2	3
23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3
42	I found it difficult to work up the initiative to do things	0	1	2	3

GWAHS DBT Program Evaluation Self-Harm Inventory

Have you had any episodes of self-harming behaviour in the past month?

- Yes No

If yes, then please tick which of the following apply to you, and grade their **intensity** and **frequency**. The descriptions below the gradings are intended as a guide only. There may be other ill effects of self-harming behaviours that you believe make them more or less severe, so pick the category that best describes your situation.

1. Physical Self Mutilation May include cutting, burning, scratching, abrasions, pulling hair, inserting objects.

INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> No medical attention required Little or no risk of scarring or permanent damage 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> Medical attention required Some risk of scarring or permanent damage 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> Medical attention required Risk of death if not treated or discovered
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> 1 x per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> 2 – 3 x per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> 4 x per week or more

2. Over Medication May include prescription medications, over the counter medications.

INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> Results – sedation/“losing time” or uncharacteristic behaviour lasting up to 6 hours No medical risk 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> Results – sedation/“losing time” or uncharacteristic behaviour lasting 6 – 12 hours Taken as part of a medication ‘cocktail’ 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> Results – sedation/“losing time” or uncharacteristic behaviour lasting more than 12 hours Risk of death if not treated or discovered
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> 1 x per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> 2 – 3 x per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> 4 x per week or more

3. Illegal Substances May include street drugs, e.g. marijuana, speed, cocaine etc.

INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> Results – sedation/“losing time” or uncharacteristic behaviour lasting up to 6 hours No medical risk 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> Results – sedation/“losing time” or uncharacteristic behaviour lasting 6 – 12 hours Taken as part of a medication ‘cocktail’ 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> Results – sedation/“losing time” or uncharacteristic behaviour lasting more than 12 hours Risk of death if not treated or discovered
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> 1 x per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> 2 – 3 x per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> 4 x per week or more

4. <input type="checkbox"/> Alcohol		
INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> • More than a social drink • Results – sedation/"losing time" or uncharacteristic behaviour • No medical risk 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> • Results – sedation/"losing time" or uncharacteristic behaviour lasting 6 – 12 hours • Taken as part of a medication 'cocktail' • Interferes with ability to fulfil commitments such as work, study, family, social. 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> • Results – sedation/"losing time" or uncharacteristic behaviour lasting more than 12 hours • Risk of death if not treated or discovered • Leading to increased risk taking behaviours such as promiscuity, DUI.
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> • 1 x per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> • 2 – 3 x per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> • 4 x per week or more

5. <input type="checkbox"/> Excessive Exercise		
INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> • 1 – 2 hours exercise in a day 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> • 2 – 4 hours exercise in a day 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> • Greater than 4 hours exercise in a day • Constant movement all day such as walking, jiggling, standing up.
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> • Less than 5 days/week 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> • Almost every day 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> • Every day

6. <input type="checkbox"/> Binging/Purging/ Restricting		
INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> • A small amount of food (1 standard meal size) • OR vomited once • OR restricted food for 1 meal period 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> • Binged about 2 standard meal sizes of food • AND/OR vomited once/twice • AND/OR restricted for one/two meal periods 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> • Binged continuously, large amounts of food i.e. more than 2 standard meal sizes • AND/OR vomited 2 times • AND/OR restricted all meals
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> • 1 – 2 days/week 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> • 3 – 4 days/week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> • 5 – 7 days/week

7. <input type="checkbox"/> Neglect of Personal Care		
INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> Ignore 1 aspect of grooming 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> Ignore several aspects of grooming 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> Pay no attention to grooming
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> 1 day per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> 2 – 3 days per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> 4 days per week or more

8. <input type="checkbox"/> Risk Taking Behaviours <small>May include: driving recklessly, placing self in danger of injury, etc.</small>		
INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> Little or no risk of requiring medical attention Little or no risk of legal consequence Little or no risk to reputation, relationships or physical wellbeing. 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> Some risk of requiring medical attention Some risk of legal consequence Some risk to reputation, relationship or physical wellbeing 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> Likelihood of requiring medical attention Likelihood of legal consequence Likelihood of damage to reputation, relationships or physical wellbeing
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> 1 day per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> 2 – 3 days per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> 4 days per week or more

9. <input type="checkbox"/> Gambling		
INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> Little or no impact on financial, social, family and professional commitments 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> Some impact on ability to meet financial, social, family and professional commitments. 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> Causing significant disruption to ability to meet financial, social, family and professional commitments.
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> 1 day per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> 2 – 3 days per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> 4 days per week or more

10. <input type="checkbox"/> Excessive Shopping/Purchasing		
INTENSITY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> Little or no impact on financial, social, family, professional and time commitments. 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> Some impact on ability to meet financial, social, family, professional and time commitments. 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> Causing significant disruption to ability to meet financial, social, family, professional and time commitments.
FREQUENCY		
<input type="checkbox"/> Minimal <ul style="list-style-type: none"> 1 day per week or less 	<input type="checkbox"/> Moderate <ul style="list-style-type: none"> 2 – 3 days per week 	<input type="checkbox"/> Severe <ul style="list-style-type: none"> 4 days per week or more

11 Isolating		
INTENSITY		
<input type="checkbox"/> Minimal • Not involved in usual social interactions	<input type="checkbox"/> Moderate • Contact restricted to work/appointments/essential commitments.	<input type="checkbox"/> Severe • Complete withdrawal. No contact with family, work colleagues or friends.
FREQUENCY		
<input type="checkbox"/> Minimal • 1 day per week or less.	<input type="checkbox"/> Moderate • 2 – 3 days per week	<input type="checkbox"/> Severe • 4 days per week or more

Suicide Attempts

Have you attempted suicide within the past 3 months?

- Yes**
 No
 Thought about it but did not attempt

If yes, please indicate the approximate number of attempts.

What methods were used?
