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Improving Awareness of Borderline Personality Disorder in Primary Care

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Abstract

Background: Borderline personality disorder (BPD) is a psychiatric disorder that falls into the Cluster B personality disorders, per the DSM-5. Borderline personality disorder is described as a disorder that follows a path of regular emotional instability and detrimental interpersonal relationships. Individuals who are diagnosed with borderline personality disorder are often found to be difficult to manage and treat from a primary care perspective.

The purpose of this project was to increase the awareness of primary care Nurse Practitioners (NPs) about BPD in order to increase their knowledge about BPD and provide continuity of care in a primary care setting for patients with this disorder.

Methods: The sample consisted of 18 NPs who practiced in New York State, or were recruited using the Massachusetts Coalition of Nurse Practitioners. An education toolkit, developed by the National Institute of Mental Health which provided information about BPD, including signs and symptoms, was emailed to primary care NPs. A pretest, followed by a review of the toolkit module, was then followed by a post-test. The pre and post-tests measured the knowledge level of NP primary care providers in recognizing symptoms of borderline personality disorder.

Results: 18 NPs were tested in 3 categories relating to BPD which included familiarity of symptoms, their overall knowledge of the disorder, and their comfort at diagnosing the disorder. The results were compared between the pre-test and the post-test after reviewing the education module.   At the end of the project, the NPs scores in familiarity of symptoms increased by 68.4%, overall knowledge increased by 70% and overall comfort increased by 45.5%.

Conclusion: The original goal of the project was to have an overall knowledge increase by at least 25% in the three measured categories relating to BPD. The percentage increases in the three categories exceeded the goal of 25% between the pre and post-test. Therefore, increasing awareness and education about BPD in those surveyed resulted in an overall knowledge gain about the disorder and overall increase in mental health awareness.

- Keywords: *Borderline personality disorder, Dialectical Behavior Therapy, fragmentation of care, referral in primary care, Borderline personality disorder suicidality, Borderline personality disorder medication, mental health statistics*

Improving Awareness of Borderline Personality Disorder in Primary Care

Introduction

Borderline personality disorder (BPD) is a psychiatric disorder that is characterized by instability of interpersonal relationships, self-image, and emotions, as well as impulsivity that causes judgment impairment or distress (Skodol, Stein & Hermann, 2016). Recent statistics show that approximately 1.6% of the U.S adult population is diagnosed with BPD and that 42.4% of those individuals are seeking treatment from their primary care provider or a therapist (Lenzenweger, Lane, Loranger & Kessler, 2007). This number may be as high as 5.9%, and nearly 75% of individuals diagnosed with BPD are women (National Alliance on Mental Health, 2018).

The number of individuals with undiagnosed BPD is most likely higher due to lack of proper diagnosing and provider failure to appropriately diagnose, due to the stigma of the disorder and the lack of knowledge by the primary provider (Sisti, *et al.,*2016). Approximately 20% of primary care visits have a mental health component, 46% of adults will have a mental health problem at some point in their lives and roughly two-thirds of them do not receive the necessary care (Laff, 2015).

The most current evidence suggests that individuals with BPD should be started on anti-psychotic, anti-depressant therapy, or mood-stabilizers, in conjunction with some type of psychotherapy, as the primary means of treatment (Skodol, & Bender, 2016). A relatively new type of therapy known as Dialectical Behavior Therapy (DBT) has been defined as "the gold standard" for individuals with BPD (Behaviorialtech.org, 2016).

Dialectical Behavior Therapy, developed by Marsha Linehan, is a type of psychotherapy that originated in the 1980's from evidenced based treatment.   The therapy focuses on mindfulness, distress tolerance, interpersonal relationships, and how to regulate emotions. It was originally designed to help create a treatment for multi-problematic suicidal women and targeted their suicidal behavior and focused on changing cognitions that lead to criticism and feelings of misunderstanding and invalidation from individuals (Chapman, 2006). Studies have shown that individuals diagnosed with BPD that have been enrolled in DBT, showed a greater improvement in symptom management as compared to individuals not enrolled (Barnicot, Gonzalez, McCabe, & Priebe, 2016).

Background

Current research has shown that the use of DBT is an effective type of therapy to help regulate emotional outbursts in individuals with BPD (Barnicot, Gonzalez, McCabe, & Priebe, 2016). The problem for this population is that few primary care providers are informed about or utilize DBT or are knowledgeable about the appropriate medication regimen for their patients. Many providers graduate from school with minimal knowledge about mental health disorders and their symptoms, and how to appropriately manage them (Smith, *et al.,* 2013).

Brief psychotherapies and treatments can be beneficial and effective in primary care, but general practitioners are typically not trained in their consistent use, therefore, primary care mental health guidelines emphasize a psychiatric referral as the most appropriate option for these patients (Kravitz, *et al.,* 2006). Although this is acceptable practice, primary care providers could benefit from increased knowledge and awareness of mental health disorders to better recognize symptoms and refer to the specialist in an appropriate time frame.

Problem Statement

There has been an identified problem within the healthcare system of primary care providers not always knowing how to appropriately treat and recognize patients that present with mental health issues (Lenzenweger, Lane, Loranger & Kessler, 2007).   The risk of delay in care among individuals with borderline personality disorder, due to lack of awareness and knowledge by primary care providers results in increased suicidal ideation and self-harm and is indicated from delay of diagnosis and lack of provider education on how to recognize the illness (Skodol, Stein, & Hermann, 2016).

From the patient's perspective, a provider not being able to recognize a diagnosis can lead to delay in appropriate care, which can then lead to an increased rate of emotional outbursts and suicidal ideation from these patients (Sisti, Segal, Siegel, Johnson & Gunderson, 2016).   A potential solution to this problem would be to increase the knowledge among primary care providers about the proper recognition of BPD to increase provider awareness and provider ability to better recognize the disorder and quickly enroll patients in DBT and refer them to the appropriate specialist. The plan to increase provider awareness and knowledge was made possible in this project by utilizing an education toolkit about BPD and surveying the overall knowledge of NPs in a pre and post-test survey.

Review of Literature

The University of Massachusetts's Amherst's online library database was utilized for this literature search, which included CINAHL, PubMed database and Google Scholar.   In addition, the current evidence-based treatment of borderline personality disorder was obtained online using UpToDate.   The articles from CINAHL and PubMed ranged from personal anecdotes to

randomized controlled studies that involved the use of DBT and antipsychotic medications and all the literature obtained was from 2006 to 2018. Thirty-One articles were reviewed that addressed DBT, mental health statistics, BPD symptoms and BPD interventions. Exclusion criteria included articles that were anecdotes, or any article that involved a disorder that did not pertain to mental health or borderline personality disorder.

The search terms started out very broad such as borderline personality disorder, dialectical behavior therapy, and fragmentation in care, and then became more specific such as dialectical behavior therapy effectiveness, suicidality and borderline personality disorder, and fragmentation in care and mental health. The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) rating scale (Johns Hopkins University, 2005), from the Johns Hopkins University was used in evaluating and analyzing the research which resulted in articles that were Level I A to Level VB.

The National Alliance of Mental Health recognizes nine symptoms/criteria that are associated with BPD. These symptoms include frantic efforts to avoid abandonment, unstable personal relationships, distorted and unstable self-image, impulsive behaviors, self-harming behaviors, periods of intense depression, chronic feelings of emptiness, intense anger, and dissociative feelings (National Alliance of Mental Illness, 2018). To be diagnosed with BPD, an individual must meet five of these criteria.

Several articles and UpToDate.com recommend starting antipsychotic or antidepressant medication, such as aripiprazole or fluoxetine, in conjunction with DBT for the treatment of BPD (Skodol, Stein & Hermann, 2016). However, The Royal Australian & New Zealand College of Psychiatrist's states that medications offer little benefit to those diagnosed with BPD, and that psychotherapy is the best means of treatment (YourHealthInMind.org, 2018). In one of the

studies reviewed, second-generation antipsychotics, and mood stabilizers (such as carbamazepine, lamotrigine and topiramate) were shown to be more effective than first-generation antipsychotics at treating BPD symptoms (Stoffers, *et. al.,* 2010).

In the articles reviewed, some barriers that were mentioned included small sample sizes due to lack of willingness from participants to participate in projects and research studies, compliance of participants with follow-ups and therapy sessions, along with limited information on psychiatric primary care.   The literature suggests that many of these individuals were not treated for their illness by their primary care provider, and that majority of them were referred for treatment (Barnicot, Gonzalez, McCabe, & Priebe, 2016). As this is relatively the standard practice, increasing the time between provider appointments can delay much needed care leading to increased rates of suicidal intentions by these individuals (Nicaise, Dubois, & Lorant, 2014).

To summarize, DBT has generally been considered as the most effective psychoanalytical therapy with helping control emotional outbursts and reducing suicidality in patients with borderline personality disorder (Feigenbaum, *et al.,* 2012). Therefore, increasing primary care provider knowledge about BPD and DBT will hopefully help increase provider awareness about the disorder and hasten the process of enrolling their patients in DBT, subsequently lowering the risk of self-harm, and improving patient outcomes. The search of the literature suggests that there is a need for primary care providers to recognize their patients with BPD and identify the proper methods at treating the disorder. However, due to the lack of knowledge about the current treatments and the disorder itself, this has posed difficult for many primary care providers and recently graduated medical professionals (Smith, *et al.,* 2013). Although there is a large amount of research, and current up to date protocols on how to treat the disorder are readily available, many primary care providers have only minimal knowledge about

the disorder itself, and how to appropriately manage it (Croghan & Brown, 2010). Individuals

with BPD frequently visit primary care offices, and large numbers of these individuals are prone

to self-injury (Lamph, 2011). These individuals are often overlooked, mismanaged, or

stigmatized, which leads to increased rates of self-harm due to lack of provider knowledge

(Lamph, 2011). The intervention proposed was to utilize an educational toolkit that included all

this information on the diagnosis and treatment of BPD that would enable primary care providers

to feel more comfortable at recognizing the disorder and increasing the awareness that would

allow the provider to properly recognize the disorder.

Several articles were also researched to investigate the knowledge of mental health in

primary care. Recent statistics indicate that between 1999 and 2014, death by suicide has

increased by 24% in the United States. Moreover, 77% of people who committed suicide had an

encounter with their primary care provider in the year prior to death (Easley, 2017). Another

article relating to mental health awareness by primary care stated how increasing practitioner's

awareness of mental health related issues, improving training and assessment skills, and

removing barriers to accessing and promoting the correct therapy are all factors that can lead to a

decreased rate in delay of care and appropriate management (Saini, Chantler & Kapur, 2016).

Theoretical Framework

The theoretical framework used for this project was Albert Bandura's Social Learning

Theory (Bandura, 1977). This theory describes the four important factors in social/

observational learning that include attention, retention, reproduction, and motivation (McLeod,

2011). (Appendix A). This theory can frame how the toolkit intervention will educate providers

on borderline personality disorder and its primary symptoms. The theory and model apply to

this project because the provider is to use the toolkit and gain information about a particular

disorder that they are not familiar with, thus bringing attention to the problem. The providers

retained the information provided in the toolkit and then enhanced their own skills in mental

health by increasing their overall knowledge about the disorder. The reproduction aspect of the

theory comes from the providers hopefully will continue using the information learned from the

toolkit within their practice, and better their own skills at recognizing BPD. The last piece is

motivation, which is where the provider feels motivated about the topic and feels confident in

making clinically accurate recognition about the disorder at a primary care level.

Goals and Objectives

The goal of the project was to increase the number of primary care NPs who state that

they are comfortable recognizing symptoms of BPD in a patient with the disorder, and who feel

as though their overall knowledge level about the disorder has increased by at least 25% in a

two-month span, after studying the toolkit. The goal sample size was originally 25-50 Nurse

Practitioners, however 18 were recruited and took both the pre and post-test. In order to get the

largest number of NPs who were specialized in family practice or primary care, several

recruitment strategies were used. Emails went out to NP organizations, such as the

Massachusetts Coalition of Nurse Practitioners and NPs from the New York area in order to

obtain the largest sample size possible.

The providers took the pre-test and post-test at their leisure within a two-month period,

from January 2018 to the middle of March 2018. The post-test had to be taken after the

education module was completed and reviewed. The Doctor of Nursing Practice (DNP) student

compiled the data during this time and reached out to the providers one month after the initial

information was sent, as a follow up to make sure the education and post-test were completed.

Implementation plan

The implementation plan included gathering all the information obtained about

interventions for BPD along with its signs and symptoms, and finding a singular toolkit to utilize

and disperse. This toolkit consisted of an email document that providers perused when they had

free time, with an online module provided by the National Institute of Mental Health

(https://www.nimh.nih.gov/health/topics/borderline-personality-disorder/index.shtml), in order to

increase their knowledge for the post-test.   A pre-test was administered that tested the

participants' knowledge about BPD, its current treatments, and how comfortable they were at

recognizing the symptoms.   Recruitment of the providers started approximately two months in

advance of the pre-test dispensing and consisted of being approved by the Massachusetts

Coalition of Nurse Practitioners to utilize their email list.

NPs in New York State were also recruited to participate in the project and express their

interests in learning more about BPD. The next step included dispensing the pre-test, education

toolkit, and post-test to the NPs via email. The DNP student collected the survey information

using SurveyMonkey during this time. At the end of the two-month period, all the data was

compiled and compared.

Within the two months, a post test was conducted where providers would be asked

questions about BPD and its management and if they would feel more comfortable recognizing

these individuals after the toolkit. The goal was to have the providers score better on the post-

test than on the pre-test at noticing signs and symptoms of BPD, and to have the average score

increase by at least 25% in the categories of familiarity, knowledge, and comfort from the

beginning to the end of the implementation program.

Project Design and Methods

The project design was an educational intervention quality improvement project that used

the most current evidence-based practice and a pre and post intervention analysis to measure the

intervention's effectiveness.   The overall goal of the project was to increase the NPs level of

knowledge by 25% after studying the toolkit.   The project lasted two months to ensure adequate

time for distribution and post test analysis, and the number of providers that stated they felt more

comfortable recognizing BPD individuals, was compared before and after the education.

The toolkit consisted of a five-page manual that provided information about borderline

personality disorder, the use of DBT and the most current up to date protocol on how to manage

these individuals, provided by the National Institute of Mental Health (See Appendix E retrieved

from https://www.nimh.nih.gov/health/topics/borderline-personality-disorder/index.shtml).   The

toolkit was easily accessed as an email attachment with the URL provided.   The data on how

many providers felt uncomfortable at recognizing the disorder before the toolkit was then

compared to how many providers felt more comfortable at recognizing the disorder after the

toolkit was reviewed.

Setting and Resources

The sample consisted of NPs, in a primary care setting, that practiced in either New York

state or in Massachusetts.   Current estimates state that approximately 20% of the primary care

patient population are diagnosed with some type of mental health issue in their lifetime that

requires psychotherapy, a psychotropic drug, or counseling (Center for Disease Control and Prevention, 2014). Based on this statistic, there is a high probably that providers in a primary care setting have come across an individual with mental illness, including BPD. In order to ensure an adequate number of participants, multiple primary care settings were considered for the project, along with multiple providers. The sample of NPs practiced in such specialties as family practice, home care, pediatrics, and internal medicine.   The Massachusetts Coalition of Nurse Practitioners was contacted and was used as a source to disperse the pretest, toolkit and posttest.

Ethics and Human Subjects Protection

Informed consent is a process in which the researchers provide information to any participant in a study or project regarding the details of the research prior to their enrollment in the case (Umass.edu, 2017).   This meant that the DNP student had to obtain informed consent from the providers that were willing to take part in the project prior to enrolling them.   However, this project was not research but rather a quality improvement project, therefore no patient related health information was involved. The University of Massachusetts, Amherst Internal Review Board (IRB) Human subjects Determination form was submitted and approved. It was made clear that no patient health information was released during the project.

Due to this project mainly focusing on the provider's actions and not the patients, a breach in health-related information was highly unlikely, however, information such as patient names were not used in the study and it was brought to the participants attention that only simple demographics and information were to be used.   This way, patient confidentiality and provider confidentiality were kept intact. The providers only reported their names for the original email, after that, only their initials were utilized for any data compilation. If two providers had the

same initials, a number was designated to each of them after their initials to keep data consistent.

Specifics as to what facility they work at, or their full name were not used in the project.

Timeline

The project itself took approximately six months, including toolkit preparation, pre and

posttest construction and then information distribution. The DNP student educated the providers

about BPD in an online education module provided by the National Institute of Mental Health

(2017). Once the project was approved by the University of Massachusetts Amherst's

institutional review board and the Massachusetts coalition of Nurse Practitioners, the recruitment

of the providers started.   The two-month data collection period began in January 2018 after

being approved and ended in March 2018. After the two months, the DNP student compiled the

data from the pre and posttests, and the pre-and post-test data were compared and analyzed

(Appendix D.).

Table 1. Timeline of project

Pre-Test Initiated	Toolkit Initiated	Post- test	2 month span	Conclusion
Determine Scores from Initial Pre-test from NPs		Determine Final Scores from Post-test from NPs	Compile data from Primary Care NPs	Compare between pre and post test

Data Analysis/Statistical Analysis Plan

The DNP student was responsible for distributing the URL to the toolkit provided by the National Institute of Mental Health. Prior to this, the DNP student was recruiting the primary care NPs to take part in the project.   In order to compare the pre and post (See Appendix C.) test scores, a formula was used to determine the percentage increase between the pre and post-test answers. The formula used to calculate the percentage increase was the original average score of the selected category subtracted from the new average score, then divided by the original number, and then multiplied by 100.

The total number of providers that listed that they felt comfortable with the protocol, and were able to better recognize the signs and symptoms of BPD, was then compared to the total of number of providers that listed that they did not feel comfortable with the protocol and did not feel they were able to better notice the signs and symptoms of BPD, in a series of three categories which were familiarity, knowledge and comfort.

Results

The total number of NPs surveyed in this project was 18 (n=18) and the average number of years practiced was 9.2 years. Of the 18 NPs, seven work specifically with adults, two work in internal medicine, seven in pediatrics and two in family practice. Of the 18 NPs, only one stated that she had some psychiatric experience in the past. Each NP was given a pre-test with 10 questions, the provided education toolkit, and a 10-question post-test in an email and email link to the SurveyMonkey surveys.

The questions focused on familiarity with BPD, knowledge of BPD and overall comfort with BPD. The three categories were measured on a scale of 1 to 5 with 1 being the least of that subject and 5 being the most of that subject. For example, if the question pertaining to familiarity in the pre-test (Appendix C.) had a score of a 2, that meant the provider felt slightly uncomfortable with recognizing the signs and symptoms of BPD, whereas if they scored a 5, it meant they were completely comfortable with recognition (see Table 2.). The averages of all the scores were calculated at the end of the survey duration and compared to the post-test average scores.

Table 2. Scales used on Pre and Post-test analysis

	1	2	3	4	5
Familiarity	Unfamiliar	Slightly Unfamiliar	Average Familiarity	Moderate Familiarity	Familiar
Knowledge	No Knowledge/no gain	Minimal knowledge/ minimal gain	Average Knowledge/ average gain	Moderate Knowledge/ moderate gain	Knowledgeable/ abundant knowledge gain
Comfort	No comfort/no gain	Minimal Comfort/ minimal gain	Average comfort/ average gain	Moderate comfort/ moderate gain	Comfortable/ abundant gain

The overall pre-test average for familiarity was 1.9, meaning that the NPs felt slightly unfamiliar with recognizing the signs and symptoms and could name approximately two of the nine diagnostic criteria for BPD. The post-test average for familiarity was 3.2, which meant on average the NPs felt neutral familiarity and could name approximately 3-5 of the nine diagnostic criteria (Appendix B.) This resulted in an overall 68.4% increase in being familiar with the symptoms and diagnostic criteria for BPD.

The next category surveyed was the amount of knowledge an NP knew about BPD, versus how much they believed they gained after the education toolkit. The overall average of the pre-test score was 2.3, indicating that NPs had minimal knowledge about BPD prior to the education toolkit, whereas the post-test score was a 3.9 which was indicative that the NPs, on average, felt as though they gained a moderate amount of knowledge, thus resulting in a 70% increase in knowledge. Finally, the last category surveyed was if the NP felt comfortable making a diagnosis of BPD before and after the toolkit. The pre-test average was 2.2 which showed that on average the NPs were slightly uncomfortable with making a diagnosis of BPD, while the post-test average was 3.2, which showed minimal comfort gain and overall increase of 45.5% (Appendix B.)

The average for the three categories combined for the pre-test was a 2.1 which was indicative that the NPs generally did not feel knowledgeable, familiar, or comfortable with making and treating a diagnosis of BPD. The average of the 3 categories for the post-test, and after reviewing the education toolkit was 3.4 which showed an overall 61.3% increase with knowledgeability about BPD.

Barriers

The NPs surveyed worked at sites that are a primary care focused, such as a family practice, internal medicine, or a pediatric clinic. Primary care settings provide a first line of treatment for everyday illnesses and for up to date current medical records. These places are generally run by a Medical Doctor (MD) or NP and have a population of patients with different health issues, including mental health. Barriers that were encountered during this project were, the NPs unwillingness to participate in the project, lack of interest with the toolkit by providers, obtaining a large enough sample size, and having the NPs follow through with both surveys. Four NPs either completed only one survey, or never followed through on both surveys, therefore leading to data that could not be used.

Along with this, many primary care providers were not experts in mental health and asking them to recognize a particular mental health disorder lead to a lack of interest in participation. Similarly, making a correct mental health diagnosis is often a challenge, even by a psychiatric specialist (Smith, *et al.,* 2013), and asking a primary care NP to recognize a certain mental health disorder lowered the average result of an NP feeling comfortable with recognition. Diagnosing a personality disorder is often difficult for practitioners. In the past such disorders, including BPD, were often a deferred diagnosis under Axis II before the axes were eliminated in the DSM-5 (Burke, 2015).

Discussion

With the overall increase in the three categories of familiarity, knowledge and comfortability being 61.3%, this showed that the project exceeded the goal of increasing awareness and knowledge about BPD by 25%. Familiarity and knowledge gain were the two most improved categories, whereas comfortability did not have as much of a gain from pre-test

to post-test. Comfortability did not improve as dramatically as the other categories, most likely

due to the fact that none of the NPs had a psychiatric background and have rarely encountered

the diagnosis of BPD. Despite being educated about the disorder, many of the NPs still did not

feel comfortable making a definitive diagnosis, however, after the education, the data showed

that majority felt slightly more comfortable if given the opportunity and felt as though they could

refer to a specialist with a possible diagnosis with more accuracy than before.

One thing that was noted was that in the pre-test, 44.4% of the providers knew or had

some prior knowledge as to what DBT was, whereas after the education, 100% could state that it

involved mindfulness and controlling one's emotions.   The education toolkit was easy to utilize

and proved that succinct and straightforward education was the best approach to retaining

information and increasing overall knowledge.

Psychiatric disorders are difficult to manage, let alone diagnose, so asking providers that

do not have a psychiatric background (such as the Pediatric primary care NPs) can lead to

difficulty in recruiting providers for a survey.   Overall, the project showed an increase in overall

knowledge in BPD which can lead to improved awareness of the disorder and improve the risk of

delayed care, as the project was initiated to do.

Several aspects that could have worked better would have been to utilize more platforms

in order to obtain a larger sample size. The original goal was to have at least 25 providers, and

although 18 is a reasonable number, it is still not a large enough sample size to make an

appropriate generalization for the entire population of Primary care NPs. Another possibility to

help with adherence to the surveys would have been to send out more reminders to the NPs to

complete both of the surveys, or to add an incentive to completing them.

The average amount of time spent on both the surveys was three minutes, whereas the education toolkit average about 10, giving the entire project approximately 16 minutes to complete. Although this is a short amount of time, many NPs felt as though they did not have the free time to review the education module, so in the future, an even more condensed version may result in a higher completion rate.

The main point of the project was shown that succinct education is an appropriate approach to teaching NPs about particular disorders. There has been an increasing shortage of mental health specialists across outpatient services (National Council for Behavioral Health, 2017) and creating education toolkits that are straightforward and to the point is a great approach to giving providers the basics they need to know about disorders. Based on the overall results of this project, it can be determined that a 61.3% increase in overall knowledge can be applied to other disorders as well, and that a possible teaching algorithm to educate providers could be installed at institutions to increase awareness for providers.

Bandura's Social Learning Theory was applied to this project in the sense that the providers needed to pay attention to the details being given to them in the education toolkit, retain that information in preparation for the post-test, reproduce the knowledge they learned and continue to be motivated in improving their overall practice and post-test ratings (Bandura, 1977).   Due to the results of the project, the four aspects of the learning theory provided a reasonable framework for the project to be successful.

The majority of NPs stated that medications were used as a primary means of treatment in BPD and approximately 56% of them could not accurately describe DBT in the pre-test. However, in the post-test majority of the NPs stated that either DBT or cognitive behavior therapy was the primary means of treatment and that medications were used as a secondary

means of treatment (Skodol, & Bender, 2016).   Along with this, there was an increase in the

number of providers that included mindfulness in their description of DBT (Behavioraltech.org,

2016).   Along with the other studies that were conducted and reviewed in the literature review,

small sample sizes, participant willingness and participant adherence to the surveys were all

barriers that were experienced in this project as well.

Conclusion

The clinical problem addressed in this project was the need to increase awareness

regarding recognition and knowledge of symptoms among individuals with borderline

personality disorder in order to improve patient outcomes. The intervention being discussed in

this project, was to utilize a singular education toolkit that not only educated providers about

BPD but listed the signs and symptoms that would enable providers to recognize the disorder and

help better start the process of enrollment in DBT and referral to a mental health specialist.

The aim of the project was to increase the NPs knowledge about BPD so that they

could better recognize the symptoms and increase overall awareness and lead to better patient

outcomes. There is much discussion about how to best treat and manage BPD and the literature

indicates that DBT is the most current and effective method to treat BPD (Barnicot, Gonzalez,

McCabe, & Priebe, 2016).

If primary care providers get to a point where they can accurately recognize borderline

symptoms in patients, then hopefully the number of patients that experience hindered care would

decrease (Ellenbecker, Samia, Cushman & Alster, 2008). Decreasing hindered care has the

potential to decrease the number of self-harm and suicide attempts in these patients, and

therefore can save lives. Even though these individuals can be difficult to manage and

recognize, educating the providers is the best way to a more cohesive and safe primary care as

shown by this project.

References

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

Barnicot, K., Gonzalez, R., McCabe, R., & Priebe, S. (2016) Skills use and common treatment

processes in dialectical behavior therapy for borderline personality disorder *Journal of*

Behavior Therapy & Experimental Psychiatry 52:147-156

BehavorialTech.org (2016) Dialectical Behavior Therapy retrieved from

http://behavioraltech.org/resources/whatisdbt.cfm

Burke, B. (2015) Abnormal Psychology 2nd edition retrieved from

https://faculty.fortlewis.edu/burke_b/abnormal/abnormalmultiaxial.htm

Center for Disease Control and Prevention (2014) QuickStats: Percentage of Mental Health-

Related Primary Care Office Visists by Age Group- National Ambulatory Medical Care

Survey, United States, 2010 *Morbidity and Mortality Weekly Report* 63(47): 1118

Chapman, A.L. (2006) Dialectical Behavior Therapy: Current Indications and Unique elements

Psychiatry (Edgmont) 3(9):62-68

Croghan., T.W., & Brown, J.D (2010) Integrating Mental Health Treatment Into the Patient

Centered Medical Home *Mathematica Policy Research* Rockville, MD: Agency for

Healthcare Research and Quality

Dingley, C., Daughtery, K., Derieg, M.K, & Persing, R. (2008) Improving Patient Safety

Through Provider Communication Strategy Enhancements *Advances in Patient Safety: New*

Directions and Alternative Approaches: Volume 3: Performance and tools

Easley, C., (2017) May is Mental Health Month: A call to nursing awareness and action *Texas*

Nursing 91(2):8-10

Ellenbecker, C.H., Samia, L., Cushman, M.J., & Alster, K. (2008) Patietn Safety and Quality: An

    Evidence-Based Handbook for Nurses *Agency for Healthcare Research and Quality* retrieved

   from https://www.ncbi.nlm.nih.gov/books/NBK2631/

Feigenbaum, J.D, Fonagy, P.S., Jones, A. Wildgoose, A. & Bebbington, P.E (2012) A real-world

    study of the effectiveness of DBT in the UK National Health Service…Dialectical Behavior

    Therapy *British Journal of Clinical Psychology* 51(2): 121-141

John Hopkins Hospital (2005) JHNEBP Evidence Rating Scales retrieved from

http://www.mc.vanderbilt.edu/documents/CAPNAH/files/Mentoring/Section%206/JHNEDP%20

Evidence%20Rating%20Scale.pdf

Kraft, A.D., Quimbo, S.A., Solon, O., Shimkhada, R., Florentino, J. & Peabody, J.W. (2009) The

    Health and Cost Impact of Care Delay and the Experimental Impact of Insurance on Delays:

    Evidence from Developing Country *J Pediatr.* 155(2) 281-5.e1

Kravitz, R.L., Franks, P., Feldman, M., Meredith, L.S., Hinton, L., Franz., C., Duberstein, P., &

    Epstein, R.M. (2006) What Drives Referall from Primary Care Physicians to Mental Health

    Specialists? A Randomized Trial Using Actors Portraying Depressive Symptoms *J Gen Intern*

    Med 21(6):584-589

Kolly, S. Despland, J-N., de Roten, Y, Marquet, Pi. & Kramer, U., (2016) Therapist Adherence

    to Good Psychiatric Practice in Short-term Treatment for Borderline Personality Disorder

    Journal of Nervous & Mental Disease 2014(7): 489-493

Laff, M., (2015) Integration of Primary Care, Mental Health Sorely Needed, Says Panel

    American Academy of Family Physicians retrieved from http://www.aafp.org/news/practice-

professional-issues/20151124pcmentalhealth.html

Lamph, G. (2011) Raising awareness of Borderline Personality disorder and self-injury *Nursing Standard* 26(5): 35-40

Lenzenweger, M.F., Lane, M.C., Loranger, A.W., & Kessler, R.C. (2007) DSM-IV personality disorders in the National Comorbidity Survey Replication *Biological Psychiatry,* 62(6), 553-564

McLeod, S. (2011) Bandura- Social Learning Theory retrieved from

http://www.simplypsychology.org/bandura.html

National Alliance on Mental Health (2018) Borderline Personality Disorder retrieved from

https://www.nami.org/learn-more/mental-health-conditions/borderline-personality-disorder

National Council for Behavioral Health (2017) The Psychiatric Shortage: Causes and Solutions

retrieved from https://www.thenationalcouncil.org/wp-content/uploads/2017/03/Psychiatric-

Shortage_National-Council-.pdf

National Institute of Mental Health (2017) Borderline Personality Disorder retrieved from

https://www.nimh.nih.gov/health/topics/borderline-personality-disorder/index.shtml

Nicaise, P., Dubois, V., & Lorant, V. (2014) Mental healthcare delivery system reform in Belgium: The challenge of achieving deinstitutionalization whilst addressing fragmentation of care at the same time *Health Policy* (115/2/3): 120-127

Paolini, E., Mezzetti, F.A.F., Pierri, F., & Moretti, P. (2017) Pharmacological Treatment of borderline personality disorder: a retrospective observational study at inpatient unit in Italy *International Journal of Psychiatry in Clinical Practice* 21(1): 75-79

Rizvi, S.L., & Steffel, L.M. (2014) A pilot study of 2 brief Forms of Dialectical Behavior Therapy Skills Training for Emotion Dysregulation in college students *Journal of American College Health* 62(6):434-439

Saini, P., Chantler, K., & Kapur, N., (2016) General Practitioners' perspectives on primary care

consultations for suicidal patients *Health & Social Care in the Community* 24(3): 260-269

Sisti, D., Segal, A.G, Siegel, A.M., Johnson, R., & Gunderson, J. (2016). Diagnosing, Disclosing

and Documenting Borderline Personality Disorder: A survey of Psychiatrists' practices

Journal of Personality disorders 30(6), 848-856

Skodol, A., & Bender, D. (2016) Approaches to the therapeutic relationship in patients with

personality disorders retrieved from http://www.uptodate.com/contents/approaches-to-the-

therapeutic-relationship-in-patients-with-personality-

disorders?source=search_result&search=borderline+personalitydisorder&selectedTitle=5~150

Skodol, A., Stein, M.B., & Hermann, R. (2016) Borderline Personality Disorder: Epidemiology,

clinical Features, course, assessment, diagnosis and differential Diagnosis retrieved from

http://www.uptodate.com/contents/borderline-personality-disorder-epidemiology-clinical-

features-course-assessment-diagnosis-and-differential-

diagnosis?source=search_result&search=borderline+personality+disorder&selectedTitle=1~46

Smith, R.C., Laird-Fick, H., D'Mello, D., Dwamena, F.C., Romain, A., Olson, J., Kent, K.,

Blackman,K., Solomon, D., Spoolstra, M., Fortin VI, A.H., Frey, J., Ferenchick, G., Freilich,

L., Meerschaert, C., & Frankel, R. (2013) Addressing mental health issues in primary care:

An Initial curriculum for medical residents *Patient and Education Counseling* 94 (33-42)

Stoffers, J., Völlm, B. A., Rücker, G., Timmer, A., Huband, N., & Lieb, K. (2010).

Pharmacological interventions for borderline personality disorder. *The Cochrane Database of

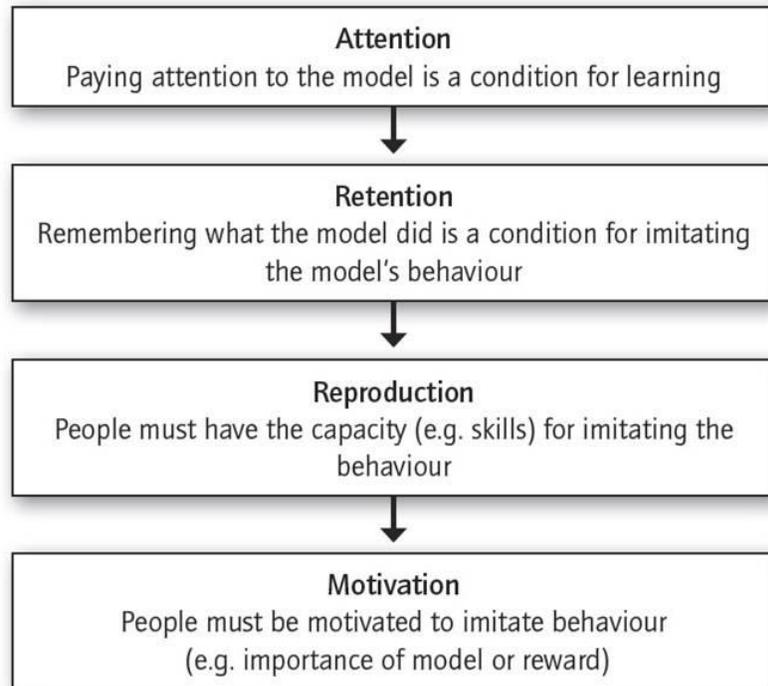Systematic Reviews*, (6), CD005653. Advance online publication.

http://doi.org/10.1002/14651858.CD005653.pub2

The Royal Australian & New Zealand College of Psychiatrists (2018) Borderline personality

disorder retrieved from https://www.yourhealthinmind.org/mental-illnesses-

disorders/bpd/treatment

Umass.edu (2017). Research Administration & Compliance *Informed Consent* retrieved from
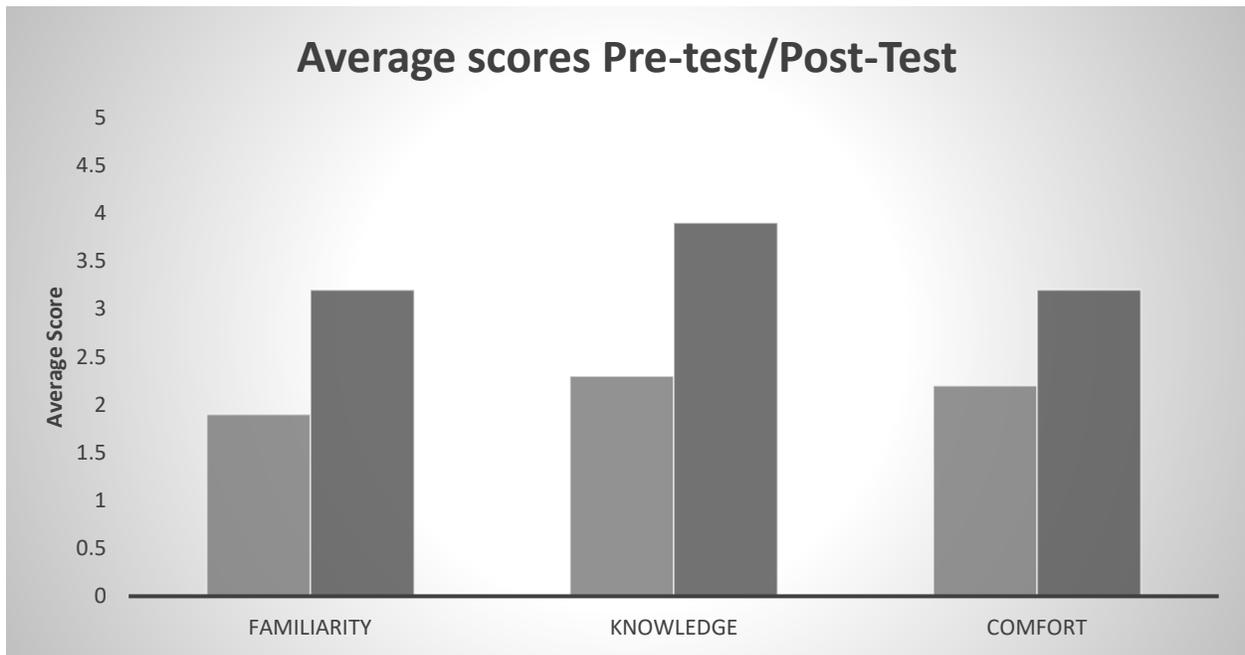
https://www.umass.edu/research/guidance/informed-consent-guidance

Appendix A
Bandura- Social Learning Theory

Four important factors in social learning
(observational learning)

Attention
Paying attention to the model is a condition for learning

↓

Retention
Remembering what the model did is a condition for imitating the model's behaviour

↓

Reproduction
People must have the capacity (e.g. skills) for imitating the behaviour

↓

Motivation
People must be motivated to imitate behaviour (e.g. importance of model or reward)

Appendix B

Graph 1. Average Scores Pre and Post Test

Average scores Pre-test/Post-Test

Appendix C
Pre and Post Test

Provider Initials:

Pre-Test

Question 1: How long have you been a Nurse Practitioner?

Question 2: What specialty do you work in (Internal Medicine, family practice, etc.)?

Question 3: Does your place of practice have a mental health resource?

Question 4: How many of your BPD patients do you refer to a specialist?

Question 5: Are you familiar with the nine criteria, as per the DSM-V, that are used to diagnose a

patient with borderline Personality disorder? If so, how many can you list?

Question 6: Are medications used as the primary treatment for BPD?

Question 7: What is Dialectical Behavior Therapy?

Question 8: What specific skills does Dialectical Behavior Therapy teach an individual?

Question 9: Do you feel knowledgeable at recognizing the symptoms of borderline personality

disorder as a primary care nurse practitioner?

Question 10: Do you feel comfortable making a diagnosis of borderline personality disorder, as a

primary care nurse practitioner, if you came across an individual you suspected suffered from the

disorder?

Post- Test

Question 1: How long have you been a Nurse Practitioner?

Question 2: What specialty do you work in (Internal Medicine, family practice, etc.)?

Question 3: Does your place of practice have a mental health resource?

Question 4: How many of your borderline patients do you refer to a specialist?

Question 5: Are you familiar with the nine criteria, as per the DSM-V, that are used to diagnose a

patient with borderline Personality disorder? If so, how many can you list?

Question 6: Are medications used as the primary treatment for BPD?

Question 7: What is Dialectical Behavior Therapy?

Question 8: What specific skills does Dialectical Behavior Therapy teach an individual?

Question 9: Do you feel more knowledgeable at recognizing the symptoms of borderline

personality disorder as a primary care nurse practitioner, after reviewing the toolkit?

Question 10: Do you feel more comfortable making a diagnosis of borderline personality

disorder, as a primary care nurse practitioner, if you came across an individual you suspected

suffered from the disorder, after reviewing the toolkit?

Appendix D

Simplified Project Timeline

Task	December	January	February	March	April	May
Proposal Approval	X					
Recruitment from Massachusetts Coalition of Nurse Practitioners	X					
Pre-Test and Toolkit Initiation		X				
Data Collection Period			X	X		
Post test and Analyzing Results				X		
Final write up and Distribution to the Public					X	X

Appendix E

Toolkit URL from National Institute of Mental Health

https://www.nimh.nih.gov/health/topics/borderline-personality-disorder/index.shtml