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**EFFECTIVENESS OF MENTALIZATION-BASED TREATMENT ON
BORDERLINE PERSONALITY DISORDER**

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ABSTRACT

Although borderline personality disorder is difficult to diagnose, the diagnosis of several symptoms of the disease is quite important such as affect regulation, interpersonal functioning and impulse control. Because, these symptoms have been found to lead to self-harming and suicidal tendencies on individuals. A number of therapies have been applied to improve symptoms in clinical settings. These are Dialectical Behavioral Therapy (DBT), Transference-focused therapy (TFT), Schema-focused therapy (SFT), Emotion regulation training, pharmacotherapy and Mentalization-based treatment (MBT). The effectiveness of most of applied therapies was proven on several symptoms.

Roots of borderline personality disorder symptoms are found as a result of bad life experiences such as childhood trauma, childhood neglect or abuse. In fact, environmental factors or genetic factors do not become a cause of borderline personality disorder by oneself. However, if a person has a tendency genetically, bad life or traumatic life experiences can be trigger causes to develop symptoms of borderline. In the light of the findings, etiology of borderline also can lead a damage on mentalization skills.

To sum up damaged mentalizing skills can be developed based on variety environmental factors and child experiences such as attachment style, insecure relationship with individuals, traumas, abuse. To fix damages on mentalization of people with borderline personality disorder, mentalizing skills are tried to develop firstly.

The findings from too many studies indicates mentalization-based treatment gives positive consequences as reducing symptoms. That's why improvement of mentalizing skills has been found to be important.

According to general literature, therapies sometimes can fail to annihilate symptoms of borderline or symptoms of comorbidity. However, effectiveness on the reduction of symptoms are reported as consequences of too many evidence-based studies. Unlike other therapies, the failure rate of MBT is low.

In this point, too many studies indicate that mentalization plays an important role to obtain any benefit on reducing symptoms of borderline, especially self-harming and suicidal thinking. Furthermore, studies also show an improvement symptom of comorbidities. In this review five papers will be evaluated to indicate a effectiveness of mentalization-based treatment on borderline personality disorder.

Data bases were included from ESCHO, Google Scholar, PubMed, Bournemouth University Library Resources, ResearchGate.

Key words: Borderline personality disorder, diagnosis, comorbidity, genetic, risk factors, adolescents, mentalization, treatments, gender differences, sex differences, cognition, causal models, interventions, symptoms, attachment.

INTRODUCTION

Borderline Personality Disorder (BPD) is one of the personality disorders. According to DSM-V (2013), personality disorder is described as follows “ an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual’s culture, is pervasive and flexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment” (American Psychiatric Association, 2013).

Clinical features of personality disorders are composed based upon various and fruitful investigations and underpinnings of these studies from past to today. According to Bolderston H. (2018) “Features of general personality disorders are long term, pervasive, can be associated with risky behaviours, high levels of co-morbidity with ‘Axis I’ disorders, predictive of poor treatment outcomes, common “(Bolderston H., 2018).

Too many studies indicated that causes of personality disorders are determined as genetic and environmental. One of the important genetic cause, heritability plays a substantial role on development of personality disorder. Within the context of researchers from past to today, most of studies focused on correlation of differences between genetic and individual, namely, in fact, studies deliberated on the heritability of the personality (Pahlen, Krueger & Wright, 2017).

Another important genetic cause is emotion dysregulation, impulsive aggression and inhibition. While impulsive aggression plays a role on the borderline and antisocial personality disorders, inhibition involves schizoid and avoidant personality disorders. According to Millon et al (2007) the evidence for a genetic influence on personality is strongest for antisocial and schizotypal personality disorders. Other evidence suggests that the paranoid and schizoid personality disorders may be linked genetically with schizophrenia.

A popular genetic hypothesis is that the wild emotional swings of the borderline personality are evidence of its association with the affective disorders, which include depression and manic-depression.

Childhood parental neglect and childhood physical abuse are shown as an environmental cause by researchers. Too many studies mentioned that effect of the personality functioning needs a cognitive fusion which is formed by negative affectivity and childhood trauma. In the light of the arguments, people with personality disorder have difficulty in keeping up with life.

Finally, there are multiple types of personality disorder which are gathered within of three different clusters. According to Lamont & Brunero (2009), while one of them is cluster A that is odd/eccentric includes paranoid, schizoid, schizotypal types of personality disorders, other one cluster B which is dramatic/ erratic involves antisocial, borderline, histrionic, narcissistic and cluster C that anxious/ fearful is covered with avoidant, dependent, obsessive- compulsive (Lamont & Brunero, 2009).

1.1 Definitions of Borderline Personality Disorder

The Diagnostic and Statistical Manual of Mental Disorders, fifth edition, (DSM-V) describes Borderline Personality Disorder (BPD) as a pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity in the beginning from early adulthood (American Psychiatric Association, 2013). Nine criteria have been determined in order to diagnose the disorder. In addition, the individual must show at least five of the following nine criteria in the diagnosis of the disease.

American Psychiatric Association (2013) entitled as follows “i) fear of abandonment, ii) unbalanced and intense interpersonal relationships, iii) deterioration of identity, iv) impulsivity in at least two areas such as sex, substance abuse, binge eating, spending, v) repetitive suicide attempt and self-harming, vi) emotional instability, vii) chronic feelings of emptiness, viii) stress-related paranoid ideation or severe dissociative symptoms ”(American Psychiatric Association, 2013). However, in the light of the diagnosis by DSM-V heterogeneity and difficulty of living with this mental illness was not presented clearly (Dudley, 2016). When the cases predicate on clinical settings, emergent findings are that firstly long-term continuation, pervasive, associated with risky behaviors, high levels of comorbidity with Axis I disorders, and being common. However, Davison, Martin, Neale, Oltmanns (2009) claimed that one of the important features of the disorder is emotional dysregulation, including difficulty understanding, being aware of, and accepting one’s emotions, poor strategies for managing one’s emotions, and avoidance of situations that elicit emotional distress. In the basic explain of features of borderline personality disorder; Bohus, Lieb, Linehan, Schmahl & Zanarini (2004) have demonstrated the signals of this disease as follows: “Clinical signs of the disorder include emotional dysregulation, impulsive aggression, repeated self-injury, and chronic suicidal tendencies, which make these patients frequent users of mental-health resources” (Bohus, Lieb, Linehan, Schmahl & Zanarini, 2004).

Moreover, features that are avoidance of being alone, being very sensitive to environmental conditions. Also, people with borderline personality disorder can need a transitional object relatedness (Skodol et al 2002). For example, they can feel safer their selves with a transitional object such as having a pet than having a interpersonal relationship.

Other side, risk of reckless driving, spending money, using alcohol, and sexual activity, as well as suicide threats, suicide attempts, and self-mutilation are observed in clinical settings

of borderline personality disorder. However, most studies showed that for a correct diagnosis of borderline personality disorder suicidal tendency or self-harm should take in consideration because of these are the dioristic indications (Kruse, Leibing, Leichsenring, Leweke, New, 2011).

1.2 Comorbidity of Borderline Personality Disorder

People which have a borderline personality disorder can develop another disease such as eating, mood, anxiety and post-traumatic stress disorder. Also, at the same time emotions become erratic and can change abruptly, especially to anger (Davison, Martin, Neale, Oltmanns, 2009, p.291) In the light of the description of the disorder, a person with borderline personality disorder shows that changeability in relationships and behaviors, and do not have a constant mood or self-image. Also, in the study of the Kruse, Leibing, Leichsenring, Leweke and New (2011) borderline personality disorder was described as prevalent mental disorder related with high rates of suicide, serious functional impairment and high rates of comorbid mental disorders. In fact, comorbidity mechanism is an interesting point. Comorbid indicates two separate disease from each other processes that occur in the same individual. These are characterized for BPD such as substance abuse, disordered eating behavior, abnormalities in mood state, and psychotic-like phenomena (Skodol et al, 2002).

1.3 Sex Differences of Borderline Personality Disorder

Too many studies indicate that gender differences are associated in borderline personality disorder. According to all versions of the Diagnostic and Statistical Manual of Mental Disorders, the result of gender pattern in this disorder is borderline personality disorder appreciable more common in women than men. For instance, the Diagnostic and Statistical

Manual of Mental Disorders, Fourth Edition, Text Revision indicates that there is a 3:1 female to male gender ratio (Sansone, Randy A & Sansone, Lori A, 2011). There is a fairly difference inside of Axis I comorbidity with regards to gender. This difference is described like substance abuse is more common in men whereas eating disorders, anxiety or post-traumatic stress disorders (PTSD) are more common in between women. The other important point in terms of gender differences is comorbidity because, again according to Sansone, Randy A & Sansone, Lori A (2011), although the ratio of avoidant and dependent personality disorders are similar for both genders, men with borderline personality disorder are significantly more likely to have comorbid paranoid, passive-aggressive, narcissistic, sadistic, and antisocial personality disorders.

1.4 Cognition of Borderline Personality Disorder

In the previous study, people who are suffering from BPD was found with regard to impair in the recognition of the feelings, thoughts, and intentions whereas affective dysregulation, impulsivity (behavioral dysregulation), and disturbed relatedness have been identified (Preibler et al., 2010). However, Preibler et al (2010) mentioned disturbed relatedness needs more studies to gain certainty, although the relational style of BPD was found as best discriminator for diagnosis.

Cognitive schemata of BPD indicate a dichotomous thinking in people who are inside of the unstable relationships. Three dichotomous cognitive schemata were determined as (1) “The world is dangerous and malevolent”; (2) “I am powerless and vulnerable”; and (3) “I am inherently unacceptable” (Skodol et al., 2002). All of them and more show an impairment cognitively in patients with BPD. Empirical findings from a metacognitive training propound

that maladaptive cognitive biases which are dichotomous thinking, weakness in the devastation of negative memories, negative evaluation of core beliefs is reported on people with BPD. Especially, ‘negative fortune telling’ as “I am not going to have a perfect family” is found common feature of biases. Moreover, people who are suffering from BPD are reported with severe ‘social cognitive alterations and difficulties in interpersonal functioning’ (Schilling et al, 2018).

1.5 Causal Models of Borderline Personality Disorder

After mentioning of diagnosis and features of borderline personality disorder, now causal models of this disorder will be reviewed. Although causal factors are partially known, structure of causal models includes prevalently genetic and invalidating environmental factors (Skodol et al, 2002). These factors are analyzed within in the Biosocial Developmental Model which according to Linehan’s Theory is developed.

1.5 a Genetic risk factors

According to genetic factors of borderline personality disorder, heritability plays a key role to identify of risk factor on borderline personality disorder as fallows that signals or beginning of borderline personality disorder may occur firstly within the family. And so, borderline personality disorder suggesting that it may have a genetic component (Davison, Martin, Neale, Oltmanns, 2009, p.291). These inherited characteristics are defined such as neuroticism and becoming anxious easily. Then problems about regulating emotions can be another tool that could be genetically transmitted to develop borderline personality disorder. Davison, Martin, Neale, Oltmanns (2009) shows that “borderline patients are high in neuroticism; this trait is a key feature of borderline personality disorder and is known to be heritable whereas problems regulating emotions may be another key component that could be

genetically transmitted” (Davuson, Martin, Neale & Oltmanns, 2009). However, Gunderson, Kendler, Livesley, Siever, Torgersen (2002) claimed that family aggregation studies suggest the heritability for borderline personality disorder may be stronger for dimensions such as impulsivity/ aggression and affective instability than for the diagnostic criteria itself. Family, adoptive, and twin studies also converge to support an underlying genetic component to the disorder. In addition, Chanen & Kaess (2012) reviewed biological risk factors and patterns of continuity leading to BPD and their findings from genetic studies chromosome 9, serotonergic system, dopamine transporter is significantly associated with BPD (Chanen & Kaess, 2012).

1.5 b Environmental risk factors

On the other hand, environmental factors which are related to childhood family structure play an important role in the development of this disease. According to Davison, Martin, Neale, Oltmanns (2009)’s report, when people who have a borderline personality disorder compared with each other, they generally have a history of childhood physical and sexual abuse which comes from by their families or disrupted attachment relationships between child and parent, grow up in invalidating environments, child maltreatment. Namely, Bohus, Lieb, Linehan, Schmahl & Zanarini (2004) mentioned that besides of genetic factor within in the scope of impulsivity, affective instability or anxiety, also an adverse childhood experiences within the frame of environment factor pushes to have emotional dysregulation. End of this emotional dysregulation can cause to develop borderline personality disorder (Bohus, Lieb, Linehan, Schmahl & Zanarini, 2004). In this regard, these childhood neglect or traumatic life experiences were found to an effect to lead to damage lack of ability to ‘mentalize’ and in this way a person who is suffering from BPD has a difficulty to recognize mental states of his own or others’. (Vogt & Norman, 2018). For example, in a study of Löf, Clinton, Kaldo & Rydén (2018) showed negative self-image in BPD can due to trauma, abuse.

In addition, Vogt & Norman (2018) indicated lack of mentalization capacity can be considered as a consequence of BPD etiology (Vogt & Norman, 2018).

To sum up; genetic and environmental factors were depicted within etiology of borderline personality disorder. Siever et al (2002) and Kjennerud et al (2013) claimed common genetic and environmental factors cause to increase the risk factors for borderline personality disorder. However, from past to present, etiology of borderline personality disorder is seen as a limitation to understand clearly.

To provide an explanation for genetic factors, researchers generally focus on twin studies. The consequences of several twin studies were identified that this is due to genetic factor (Kjennerud et al., 2013). In addition, a result of study which was completed on Norwegian twins shows that heritability is an effect in development of borderline personality disorder (Kjennerud et al., 2013). In order to define environmental risk factors, a number of studies have been conducted. In the light of the studies psychosocial risk factors was found a key role in having the disease and can lead development of borderline personality disorder. For instance, Crowell, Beauchaine & Linehan (2009) evaluated the psychosocial risk factors as family psychopathology, disrupted attachment relationships, invalidating environments, child maltreatment and sociocultural effects (Crowell, Beauchaine & Linehan, 2009). In addition, from a systematic review study, psychosocial risk factors were expressed with five effect more clearly such as childhood trauma or abuse, unfavorable parenting, hostile object relations, insecure attachment relationship, limited symbolization-reflectiveness capacity (Keinanen et al., 2012). And, environmental factors, mostly traumatic life experiences and childhood neglect, also can lead to develop symptoms of borderline personality disorder (Distel et al., 2009).

1.6 Interventions for Borderline Personality Disorder

All interventions are generally implemented to reduce self-harming behaviors, suicide and general symptoms of borderline personality disorder.

There are two kind of treatment on borderline personality disorder including pharmacological and psychological treatments. One study shows that besides the Dialectical Behavior Therapy which is the first evidence-based treatment to reduce parasuicidal behavior symptoms of borderline personality disorder, 13 manualized psychotherapies were studied and five of them have been demonstrated within evidence-based treatments for borderline personality disorder (Choi-Kain et. al, 2017). But within fifteen studies, mentalization-based treatment (MBT), Schema-focused therapy (SFT), transference-focused psychotherapy (TFP), Dialectical behavioral therapy (DBT) (Choi-Kain et al, 2017), and Emotion Regulation Training (Biskin, 2013), Cognitive Behavior Therapy (CBT) (Bales et al., 2015) identified as effective treatment on the disease. However, DBT and SFT do not trigger mentalization skills (Brüne et al., 2013). Whereas the efficiency of all these psychological therapies has been proven, no valid results could be obtained from drug treatments, therefore, no drug has been shown to be accurate on BPD (Choi-Kain et al., 2017). In addition, pharmacotherapy has too many limitations and its efficiency need more evidence-based studies (Biskin, 2013).

2. Introduction of the Mentalization-based treatment

Mentalization is described as a mental process which is helpful to interpret of people's each other and their own selves that's why is a key term for one's own states of mind and other's states of mind (Bateman & Fonagy, 2010; Maillard et al., 2019). The concept of mentalizing which is based on Bowlby's attachment theory and cognitive theory was handled more comprehensive in 1989 by Fonagy firstly, and from past to present is utilized to identify on several mental disorders (Bateman & Fonagy, 2010).

Consequences of literature about mentalizing is found as an important factor on emotion regulation and managing impulsivity. If there is no any mentalizing in people, this can lead to have limited sense of self, no sense of personal security, weak social interaction and relationship on people (Daubney & Bateman, 2015).

The reasons of damaged mentalizing generally come from environmental risk factors such as childhood traumas or abuse especially. In fact, psychological traumas in childhood has been established as a reason of destroyed mentalization and leads to a weakness in capacity to think about mental states (Bateman & Fonagy, 2010). However, although there are too many literatures about relationship with negative life experiences and symptoms of BPD, causal effects are still reported as undetermined (Kjennerud et al, 2013). Rossouw (2015) indicated importance of mentalizing as "When patients increase the ability to mentalize, they become better able to be curious about their own minds as well as the minds of others" (Rossouw, 2015).

Mentalization-based treatment (MBT) was explored by Bateman and Fonagy to enhance pathological symptoms and comorbidity of borderline and to treat the disease. Four

components of treatment aim patient's capacity to mentalize with regard to MBT arises from psycho-education, case formulation, group therapy and individual therapy. The targeted is to obtain increasing mentalization capacity and manageable emotional states by patients who suffering from borderline personality disorder (Carrera et al., 2018). The reason is indicated as inside of interpersonal relationship patients with borderline personality disorder are reported with lack of emotion regulation and poor managing impulsivity challenges (Carrera et al., 2018).

The first aim of the MBT was described as forming an emphatic and supportive alliance and improvement mentalizing (Rossouw, 2015). According to Juul et al (2019) people with borderline personality disorder is more likely to lose the capacity to understand and interpret one's own or others' mental states when developing emotional distress. That's why, the second aim of MBT is to recognize patient's own and others' mental states in part of the attachment with affect regulation, impulse control and interpersonal functioning (Bales et al., 2015). The third aim is to reduce symptoms of borderline including suicidality, self-harming behaviors and destroyed self-image (Löf et al., 2018). Consequences from studies so far borderline-related symptoms which as emotional dysregulation, impulsivity, and suicidal ideation showed reduction significantly when increasing mentalization skills (Vogt & Norman, 2018). In addition, findings from study of Löf et al (2018) are found supportive for decreasing self-harm especially.

In the light of all literature about reducing of self-harming and suicide MBT has been found more effective than the treatment as usual in clinical settings (Rossouw, 2015). Bateman and Fonagy (2010) indicated effectiveness of MBT as a key factor to reduce self-harm and suicidal thinking while enhancing social and interpersonal relationship at the same time. Next,

MBT gives an opportunity to patients to recognize their selves inside of the relationships objectively (Bateman & Fonagy, 2010). And efficacy of MBT is reported by various studies and in conjunction with consequences of researches MBT was marked as an evidence-based treatment for people who are suffering from BPD in clinical settings (Carrera et al, 2018).

Search Strategy and Methodology

The prevent study utilizes a critical review to appreciate the mentalization-based treatment for borderline personality disorder. A literature search technique was used to gain articles from the data bases. These data bases were included from ESCHO, Google Scholar, PubMed, Bournemouth University Library Resources, ResearchGate

Inclusion and Exclusion Criteria

Recent articles had to have been published between 2013-2019. Research studies focused on borderline personality disorder, mentalization-based treatment, mentalization. All disorders other than borderline personality disorder are excluded.

CRITICAL REVIEW

The aim of this review is to how mentalization-based treatment is effective to the treatment of borderline personality disorder. Within this framework, five papers will be evaluated critically which are by the Löff, Clinton, Kaldo and Rydén, (2018), Bateman and Fonagy, (2013), Brune, Dimaggio and Edel, (2013), Bales, Timman, Andrea, Busschbach, Verheul and Kamphuis, (2105), Kvarstein, Pedersen, Urnes, Hummelen, Wilberg and Karterud, (2015). Next, an overview of the papers will be given.

Key words: Borderline personality disorder, mentalization-based treatment, mentalization.

1. Symptom, alexithymia and self-image outcomes of Mentalization-based treatment for borderline personality disorder: a naturalistic study (Löff, Clinton, Kaldo and Rydén, 2018)

The first paper has two aim. One of the aims is that the examination of mentalization-based treatment for borderline personality disorder in terms of naturalistic outcomes which is referred borderline and general psychiatric symptoms, suicidality, self-harm, self-rated alexithymia and self-image in a Swedish Psychiatric outpatient setting. The second aim is to analyze in order to correlate of effectiveness with regard to moderators in the patient baseline. This article is interpreted in the context of the effectiveness of MBT in a naturalistic setting with regard to psychiatric and psychological moderators of outcome. The paper starts briefly with a background related to mentalization-based treatment and its effectiveness on borderline personality disorder and continues with the evidence-based studies from past to present. Then its effectiveness of MBT in a naturalistic setting and on the other hand, the moderators of psychiatric and psychological outcome was analyzed. Moderating factors obtained from Bateman and Fonagy analyzes were enlarged and self-rated alexithymia, self-image and attachment style were taken into consideration. In design and setting within the context of

methods for this study patients with borderline personality disorder were evaluated in terms of all measures at baseline and then assessed in the 6, 12, 18 months on primary and secondary outcome measures.

For this study participations were recruited from the MBT outpatient program for borderline personality disorder at Huddinge University Hospital which is community-based and publicly financed, being operated within the psychiatric services of Stockholm Regional Council. All patients signed written informed consent forms to participate the research.

Zanarini Rating Scale for Borderline Personality Disorder (ZAN-BPD) interview, SCID-II interview and DSM-IV, ICD-10 was used as an inclusion criterion to determine diagnosis of borderline personality disorder. IQ < 85, psychotic disorder without schizotypal personality disorder, acute/temporary psychosis, autism-spectrum disorder, bipolar disorder type I and severe eating or substance use disorder were identified as exclusion criteria.

MBT therapists are 1-2 psychiatrists, 2-4 clinical psychologists and, in order to parts of the study period a psychiatric nurse. All of them were trained at Anna Freud Centre with basic and advanced courses. In addition, A. Bateman participated to give supervise in 1-2 days in a year besides of weekly general supervision.

For treatment section of the study, Mentalization-based treatment which is developed by Bateman & Fonagy was applied. Following this, two session was designated with regard to individual and group. The aim of these sessions was focusing on implicit mentalizing towards self and others. And for 18 months patients received both individual therapy with a psychotherapist and group sessions with 6-8 participants and 1-2 group therapist. Besides all these patients participated a perambulatory psycho-educational ingredient which was comprised of between 9-12 sessions to focus on explicit mentalizing skills such as understanding one's own or other's intentions. In addition, short presentations and exercises were used to explain mentalizing, treatment structure and focus. The study indicated three

different divided time content which are August 2005 and 2008, June 2009. These includes changes in shape of treatment. The entire team of the study recorded and reevaluated all therapy sessions. Other section of the study is Psychopharmacological treatment. It was procured by the psychiatrist team. According to the study, pharmacological treatments was used to control comorbid disorders such as depressive episodes, ADHD, and sleeping disorders. However, the study remarked that this treatment not only for the borderline conditions. For psychopharmacological treatment, Serotonin reuptake inhibitors (SSRIs), Methylphenidate, Lithium, Antipsychotic, Antiepileptic medication and Benzodiazepines were prescribed by team's psychiatrist. The treatment collecting was created 12 months of treatment or more. In addition, after completion individually follow-up was presented when it needed such as psychiatric visits, group or individually therapy sessions.

The measurement of primary outcome includes Karolinska Borderline and Symptoms Scales (KABOSS-S) which was produced from the Comprehensive Psychopathological Self-Rating Scale for Affective Syndromes. It evaluates of three general symptom subscales that Depression, Anxiety, Obsessive-Compulsive Symptoms. Also, the study indicated that this measurement tool is one specific borderline subscale consisting of the items "mood swings", "ability to understand own emotions", "self-control", "self-shooting", "feelings of abandonment", "feelings of emptiness", "self-image" and "reality presence". The study appreciated each item on a Likert scale from 0 ("non presence") to 6 ("severe").

On the other hand the measurement of secondary outcome was assessed by using Suicide Assessment Scale, Self-Report (SUAS-S) which used to measure suicidality; Symptom Check list-90 Revised (SCL-90-R) which used to evaluate general psychiatric symptoms; Deliberate Self-Harm Inventory-9 (DSHI-9) which used to assess self-harm; The Toronto Alexithymia Scale-20 (TAS-20) which used to reveal self-rated alexithymia; and lastly Structural Analysis of Social Behavior (SASB) which used to interpret self-image.

The study shows that alexithymia, self-image, attachment style which was evaluated with “Relationship Questionnaire (RQ)”, comorbidity and borderline severity at baseline were used as moderator measures. The other assessments are SCID-II to measure DSM IV Axis II disorders while the MINI-International Neuropsychiatric Interview used for DSM- IV Axis -I and to measure severity of borderline symptom ZAN-BPD was used. For this study a linear mixed model (LMM) to evaluate on primary and secondary measures while “intent to treat” principle was used to analyze data. Also, several factors were identified as a factor. These are age, childhood sexual trauma, substance use disorder, antisocial personality disorder, eating disorder diagnosis. Fixed factors, effect size and dropouts were determined clearly with using SPSS 17.07.

The results of the patient characteristics were determined had significantly higher levels of patients working or studying while sickness benefit, antisocial personality disorder and substance use disorder were fewer. Consequences of DSHI-9 indicated self-harm scores were high on younger patients. According to KABOSS-S borderline symptoms and suicidal ideation in the SUAS-S were significantly higher. Victims of rape after age of 15 were related with being female, having substance abuse disorder and being comorbid Axis I group while victim of physical abuse was found more likely to have ADHD. In addition, consequences of ZAN-BPD determined that patients with high BPD severity were most likely to be a member of the highly comorbid Axis-I and the highly fearfully attached group. Axis-II comorbidity was indicated belonged to the low-secure group.

Indicative of dropout did not show any significant difference in any primary or secondary symptom criterion or any indication of BPD severity at baseline. On the other hand, patients who did not respond to self-reports did not have any difference on the measurement of the primary or secondary symptom and borderline personality severity in the Axis I or Axis II comorbidity, ZAN-BPD scores. During follow-up, patients with no self-report data were not

more likely to dropout. Results of primary outcome showed that symptoms of borderline were significantly improved over time and effect size of the borderline symptom subscale was found similar to the general symptom subscales. In secondary outcomes results detected an improvement over time about suicidality according to SUAS-S and general psychiatric symptoms on the SCL-90. While the “Difficulty Identifying Feelings” subscale had a slightly higher effect size rather than effect size of the other subscales, self-rated alexithymia improved on all subscales with regard to TAS-20. In addition, Self-image, Autonomy, Self-love, Self-hate and Self-control presented an improvement over time according to measures of SASB. the DSHI-9 self-harm also improved over time. Finally, consideration of interaction showed that there was no interaction with change in primary and secondary outcomes over time or fixed factors. About moderator, age was added as a moderator because of age had a highly broader correlation with self-harm. That’s why the study indicated clearly that age was found to moderate change in self-harm on the DSHI-9 and the moderating interaction of age with time could have been influenced by the higher rates of baseline self-harm in younger patients. (18-24 years 91%, 25-30 years 60%, 31-39 years 54% and 40 years or older 38%). To sum up, borderline personality disorder is a related problem with mentalization. An important result of the present study was mentioned alexithymia over time according to self-reported so that treatment improved patients’ capacity to identify feelings. Patients who undergoing MBT showed a rise their capability to identify emotions and direct their thinking towards internal states. Self-rating mode was not found adequately to assess alexithymia and other modes would be needed. Other aspects of mentalization such as affective mentalization of others or cognitive mentalization of self and others were not measured in the present study. Functioning Questionnaire (RFQ) which presents more specific instrument for assessing a key aspect of mentalization was found a high correlation with self-rated alexithymia and importance of its was argued for future studies to use the RFQ. Patients with very negative

self-image were found at the start of the treatment and it represented the mentalizing conceptualization of intensive negative self-representations in Borderline Personality Disorder due to trauma, neglect and poor mirroring such as the alien self. This was also argued around psychodynamic transference-based therapy and dialectical behavior therapy which rejects consideration of negative object representations and projection of self-validation in self and other. Self-image which has been shown to be highly related to borderline personality disorder had an improvement on all aspects of the SASB after mentalization based treatment as well as effect size was mentioned high relation to greater Self-love, Self-protection and Self-attack.

According to study it was explained a preliminary confirmation of central aspects of the mentalization based treatment model. Also, other evidence-based borderline personality disorder treatments found an improved self-image however this has only been studied in one Dialectical Behavioral Therapy trial. In addition, in a naturalistic study of a psychodynamic community which including borderline patients had an improvement in that regard self-image. Taken these results showed that a mentalizing approach on the part of therapist may be especially conducive to the internalization of self-compassion. Effects of moderator were less, and severity of borderline did not affect results.

Five limitation was determined for the present study. One of these is there is no control group and it led to being suspense for an interpretation certainly. Latter, response rates for self-reports at follow-up were generally low. Thirdly, changing of treatment format. This causes different intensity between patients who received treatment. Fourth, in the event that interview, or observer ratings might capture these dimensions more objectively, alexithymia, self-image and attachment were measured only through self-report. Last one is irregular access to specialized MBT supervision and no outside video adherence ratings because of being the first unit in Sweden to implement the model. And future direction was mention that

need to implement a more stringent control of the treatment. In conclusion the present study claimed that mentalization-based treatment is an effective treatment on people with borderline personality disorder. The study contributes an effective evidence on changes in affective mentalization and self-image during the treatment. The suggesting of study that more research could be better to detect which factors are important and effects of moderator in MBT. On the other hand, randomized controlled trials are needed. And systematic treatment selection should be analyzed. Although mentalization-based-treatment was developed to be effective especially for people with mentalizing difficulties, Mentalization-based-treatment is effective was also found for borderline personality disorder people seeking specialized psychiatric care.

2. Impact of clinical severity on outcomes of mentalization-based treatment for borderline personality disorder (Bateman, Fonagy, 2013)

The aim of the study is to demonstrate treatments for patients with clinically severe disorder that's why it was hypothesized that people with borderline personality disorder needed specialist treatment. Four main indicators of increasing severity of borderline personality disorder was summarized by the present study based on the earlier reports: level of symptom distress, number of descriptive criteria met for the disorder, extent of comorbidity with Axis I disorders, and comorbidity with other personality disorders, especially in different disorder clusters.

Data from a recent RCT of mentalization-based treatment (MBT) was used to compare structured clinical management (SCM). Exclusion criteria of structured clinical management was determined as psychotic disorder, opiate physiological dependence requiring specialist treatment, mental impairment or evidence of organic brain disorder. And higher levels of severity at baseline would increasingly favor MBT over SCM was estimated.

With a recent RCT the present study compared MBT with SCM which is manualized on patients with borderline personality disorder in a pragmatic randomized superiority trial. The trial was registered with the International Standard Randomized Controlled Trial Number Register while approved by the local research ethics committee for Barnet, Enfield and Haringey Mental Health National Health Service (NHS).

Structured clinical management is a generic intervention which is matching the non-specialized features of MBT in terms of intensity, organization, pharmacological treatment depends on routine psychiatric practice. On the other hand, mentalization-based treatment is a specialized therapy depends on representation of deficit in the capacity and regulation of mental states people with borderline personality disorder. According to patients who participated to SCM showed an improvement on most measure. Patients were treated for 1.5 years with measurement points at baseline and at 6 months, 12 months and 18 months after randomization.

Measurement of primary outcome was absence of a crisis episodes which includes suicide, self-harm or hospital admission to prevent these in the 6 months. Measurement of secondary outcomes was actualized with independently rated Global Assessment of Functioning (GAF) scores at the beginning and end of the treatment, also self-reported psychiatric symptoms, social adjustment and interpersonal function, Beck Depression Inventory (BDI), the Social Adjustment Scale Self-Report (SAS) and the Inventory of Interpersonal Problems (IIP) were used to gain an observation. 134 participants with borderline personality disorder who were diagnosed using the Structured Clinical Interviews for DSM-IV Axis I and Axis II Disorders (SCID-I and SCID-II) attempted for this study. And they are randomized to receive MBT or SCM. Consequences of the randomization, 71 patients attempted for mentalization-based treatment while 63 patients participated the structured clinical management. Inclusion criteria for the study was detected a diagnosis of BPD; suicide attempt or episode of life-threatening

self-harm within the previous 6 months, defined as requiring hospital admission for medical treatment; and age 18-65 years. On the other hand, exclusion criteria were patients with antisocial personality disorder and substance misuse. Pre-treatment difference between the groups other than reported rape was not shown up. Also, pre-treatment variables and diagnostic data are summarized in the original report. Indicators of severity were measured in four ways: (a) severity of comorbid psychiatric syndromes (number of Axis I diagnoses); (b) severity of BPD (number of positive criteria met); (c) severity of personality disturbance (number of comorbid Axis II diagnoses); (d) severity of symptom distress, indicated by the 90- item Symptom Checklist- Revised (SCL-90-R) Global Severity Index (GSI) scores. Measurement of self-harm, suicidality and hospital admission were followed up with significant effect on clinical outcome. These were not distributed normally, and hospital admission and suicidality were rare.

Quarter of patients with three or more Axis II diagnoses recovered at 18 months in SCM. Analyzing of presence or absence of comorbid cluster A, B, C diagnoses were showed in Table 2 and only diagnosis of cluster C was found significantly associate with increased likelihood of recovery in the MBT group. Also, the number of Axis I diagnoses did not assumed as likelihood of recovery overall or selectively in treatment groups. And rate of increase in the number of patients who recovered by these criteria was showed in Table 2. Significant main or interaction effects was found only the number of Axis II diagnoses. The study claimed that patients with more Axis II diagnoses recovered at a slower rate. While 38% of those with only one diagnosis in addition to BPD had recovered by 12 months and 64% by 18 months were mentioned. At the same that the study found that only 28% and 54% of those with two or more additional diagnoses had recovered. Important point for the present study is the prediction was found significantly stronger for the SCM group according to baseline number of Axis II diagnoses. Similar association of severity indicators with recovery

rates were not found as evidence for Axis I, symptom distress or BPD severity criteria. Additional benefit from MBT was used to analyze the three indicators which are hospital admission, self-harm or suicide attempt contributing to the definition of recovery. Self-harm was found as an only component of recovery to reflect the impact of Axis II diagnosis. Generally, MBT was found more effective than SCM to reduce self-harm for patients with Axis II diagnosis. While three secondary outcomes were evaluated on the BDI, IIP, and SAS these were analyzed using the severity indicators. The contrast between SCM and MBT groups was not found significantly at 12 months and 18 months in patients with one or two diagnoses for BDI scores. However, BDI score was found very significantly lower for people with three or more diagnoses in the MBT treatment group. Although individuals with only a BPD diagnosis and no comorbidity The IIP scores were not found significantly lower at 18 months in the MBT group. Significant interaction associated with social adjustment was not shown although the MBT group had better function independently of the number of Axis II diagnoses.

The correlation between number of personality disorder diagnoses and these risk variables were hypothesized to evaluate baseline correlates of the number of Axis II diagnoses and better medical management of the multiple personality disorder diagnosis group for the greater benefit from MBT. Also, the use of medication was not found relation with group X time interactions. The results showed that MBT have a greater benefit than SCM with regard to increasing severity of BPD depend on Axis II comorbidity and symptom severity.

3. Mentalization-based group therapy for inpatients with borderline personality disorder: preliminary findings (Brüne, Dimaggio, Edel, 2013)

First of all, the study tried to build an explorative approach that combined DBT elements with MBT in a group setting over a six-week inpatient treatment for BPD. Thus, the main aim of

the present study is examination of whether or not patients appreciate and value the combination of DBT with MBT. Another aim includes what is the encouraging and its effect in the new combination. A novel “offline” cartoon-based task which is more complex than previous offline tasks were used. The assumption is that MBT program will receive well by patients with a relatively low drop-out rate and outcome of the cartoon stories will lead to some changes in mentalizing.

16 inpatients who diagnosed with Borderline personality disorder participated in the study. These patients were evaluated by a Structural Clinical Interview. All patients signed full informed consent. The study approved by the Ethics Committee of the Medical Faculty of the Ruhr-University. The patients’ main age was calculated as 27.2 years. All patients had a comorbid affective disorder. Two of them had bipolar-II disorder, four of them had a depressive episode, and ten of them had suffered from a recurrent depressive disorder, current episode. All but two patients received antidepressants.

The exclusion criteria were comorbid substance abuse, psychotic disorder, bipolar-I disorder or psychotic depression. All patients received two-stage DBT program which was the therapeutic focus on commitment and psychoeducation in the first two-week. The second four-week stage included participating a skills training twice weekly and mindful attention. Beside of these there was an individual session of psychotherapy per week and occupational therapy with physical exercise. Borderline-Symptom-List (BSL23) which has three sub-scales to captures changes in symptom severity was used to measure of the severity of the symptomatology. Mentalizing skills were measured using a new tool which is developed by DiMaggio and Brune.

For measurement of the mentalizing skills, the cartoons included scenarios of social interactions of two or more characters. Human motivations were added such as attachment, social rank, social threat, group inclusion, affiliation and cooperation for scenarios. Each

cartoon was comprised of seven pictures. Seven pictures' goal was to ask patients to bring into a logic sequence of events. There was an eighth card and it was used to show a possible ending of the story. Also, there were four different endings according to patients. These were prosocial, antisocial, avoidant, and disorganized ending. Thus, cartoon evaluated affective and cognitive aspects of mentalizing.

To obtain a statistical result, SPSS which was version 21 for Macintosh were used to analyze data and paired t-test was used to calculate pre-post-comparisons. Although MBT adjunct to DBT was well received by the patients, there was a very small drop-out.

Analyzing of pre-post comparison showed a significant decrease in symptom severity after MBT and in self-injurious behavior. In addition, subjective well-being showed an improvement.

Any difference was not found in pre-post comparison and sequencing time was not change significantly. A statistically non-significant increasing in choices of prosocial endings and a decreasing in choices of avoidant endings were detected. Also, a mild increasing was seen in antisocial choices, but disorganized choices was found unimportant for both time points.

MBT as a group therapy was integrated into an existing DBT program for inpatients with BPD. Clinically, patients showed an improvement depends on symptom severity, subjective well-being, and self-injurious. But, mentalizing skills did not show any change over time.

Patients with BPD showed a tendency to choose toward more prosocial endings and less avoidant endings of the cartoon stories. However, the effect was not found significantly because of number of participations. This was accepted as a promising first indicator to interpret social interactions for mentalizing skills that how used by patients. But more detailed analysis of data was needed for emotional and cognitive aspects of mentalizing.

This study includes some limitations. These hamper rigid consequences. First limitation is having a heavily weakness. Secondly, a randomized controlled study is needed. Thirdly, katamnestic evaluation of the long-term stability of the putative effects is warranted.

In summary, the notion of combining DBT with MBT was found feasible and practicable with regard to time management and constraints for people with BPD in an inpatient setting. In addition, drop-out rate was seemed low and MBT modules was find beneficial. According to preliminary findings mentalizing skills are not enough to improve per se that's why combined DBT-MBT treatment may change the way perceiving of people who suffering from borderline personality disorder the social world around them. In conclusion, the authors mentioned that their ongoing study and future research will promote more light on whether or not MBT designed as a group therapy setting has the potential to not only stabilize patients with regard to self-harm and emotion regulation.

4. Effectiveness of Day Hospital-Based Treatment for Patients with Severe Borderline Personality Disorder: A Matched Control Study (Bales, Timman, Andrea, Busschbach, Verheul, Kamphuis, 2015)

This study was approved by The Medical Ethical Committee of the Erasmus Medical Center Rotterdam and the institutional review board of the Viersprong Institute for Studies on Personality Disorders (VISPD). All participants signed informed consent. MBT treatment was occurred in 'de Viersprong', the Netherlands Institute for Personality Disorders. De Viersprong has three opportunity to patients with suffering Personality Disorders such as outpatient, day hospital and inpatient psychotherapy and it was approved the first treatment center in the Netherlands to implement day hospital MBT. All patients from other psychotherapeutic treatments (OPT) attended to the Study on the Cost-Effectiveness of Personality Disorder Treatment (SCEPTRE). Participants were recruited from six mental

healthcare centers which provide a specialized outpatient, day hospital and inpatient psychotherapy for patients with personality disorders in the Netherlands for the SCEPTRE study between July 2003 and April 2006. According to the Structural Clinical Interview for DSM disorders (SCID-II) 175 patients were diagnosed Borderline personality Disorder and these patients were chosen for the OPT reference group in this study. 41 patients were dispatched to day hospital MBT between August 2004 and January 2008.

Inclusion criteria was determined as meeting DSM-IV diagnostic criteria of BPD, minimum age of 18 years, and willingness and ability to give informed consent. Exclusion criteria was identified as consisting of meeting criteria for schizophrenia, intellectual impairment or organic brain disorder. DSM-IV axis II diagnoses were measured with a semi-structured diagnostic interview or the SIDP-IV and this is approved as a standard intake procedure. Five of the 41 patients were not interviewed because of staffing problems. Mental state of seven patients interfered with the administration of the interview that's why Axis II assessment could not be completed for these seven patients. Treatment outcome was evaluated at several time points. Consideration were managed at start, and 6, 12, 18, 24, 30 and 36 months after the start of treatment for MBT group. in the OPT group, 107 patients (61.1%) took follow-up assessments at the start and end of treatment, at 6- and 12-months follow-up, and again at 36 months after treatment. The other 68 patients (38.9%) received assessments at treatment assignment, and at 12,24 and 36 months after treatment assignment. The reasons of these timing differences are logistic differences between treatment centers. Time was formed in months before and after the start of treatment.

MBT program includes manualized day hospital MBT with maximum of 18 months then proceeded by a maximum of 18 months of maintenance mentalizing (group) therapy. The

evaluation of treatment outcome of the day hospital phase (18 months) and of the maintenance therapy (after 36 months) is provided by this study.

The mentalization-based treatment in day hospital included implicit mentalizing groups and explicit mentalizing groups. Implicit mentalizing group was evaluated with regard to daily group psychotherapy and weekly individual psychotherapy, and individual crisis planning from a mentalizing perspective while explicit mentalizing group was interrelating with art therapy twice a week, mentalizing cognitive group therapy and writing therapy. The week program is ended with a social hour and community meeting. Medication consultation was provided by psychiatrists when indicated.

Other specialized psychotherapeutic treatments (OPT) had 175 patients in total. 68 patients of them participated inpatient setting, 66 of them participated to a day hospital setting and 41 of them participated to an outpatient setting. For this people who suffering from ADHD, bipolar disorder, psychotic disorders and substance use disorders were excluded. When indicated, auxiliary medication was used by psychiatrists.

Mentalization-Based Treatment was provided by therapists who have degrees of clinical experience, social nurses and psychotherapists. Adherence to the MBT treatment model was chased by daily post-session supervision on adherence, as guided by the Bateman & Fungai adherence scale. Adherence was evaluated “good to excellent” by Bateman. For OPT condition all psychotherapists had a license of extensive postgraduate clinical experience. Outcome measures of treatment was assessed within psychiatric symptoms and personality functioning. And for the MBT condition, the evaluation was materialized by treatment-independent research assistants who were trained and employed by the VISPD. For the OPT condition, evaluations were materialized by independent raters at the perspective setting.

psychiatric symptoms measured with using the Brief Symptom Inventory (BSI) and the Global Severity Index. And the 118-item Severity Indices of Personality Problems (SIPP-118) was used to measure personality pathology and functioning.

Baseline differences, matching, propensity scores, longitudinal analyses were tried to calculate to have a obtaining an analytic strategy. The Fisher test for dichotomous and Student's t-test for continuous variables were used in baseline differences. To take propensity scores, expectation maximization method, Student's t-test for dichotomous variables and Pearson correlations for continuous variables were used. And longitudinal analyses were calculated using multilevel models, also known as mixed models and for this restricted maximum likelihood, ordinary maximum likelihood, Cohen's d effect size were used.

MBT patients showed significantly less often paid work or study, more a history of inpatient treatment, significantly lower scores on the SIPP-118 scales Responsibility and Social concordance and a higher average number of borderline traits in the results of baseline characteristics. In the total all scores were found significant. That's why suggestion was that patients who participated the MBT condition exhibited personality dysfunction of equal or greater severity.

Patients matching was identified according to having a paid job (or not) and having a history of inpatient treatment (or not). Matching was found successful in removing all other significant baseline differences between the matched MBT and OPT groups. A large effect sizes on all outcome variables at 36 months were found in the MBT group. reduction of psychiatric symptoms was detected. OBT group also showed an improvement over time. There were moderate improvements for the domains of personality functioning. The superior

outcome appeared in the MBT group. A significant on relational functioning was not found between-group difference.

Effectiveness of an (maximum) 18-month day hospital MBT in a group BPD patient was examined. Psychiatric symptoms showed a large reduction after 18 months of treatment while personality functioning showed a large improvement. Each of self-control, identity integration, responsibility, social concordance, relational capacities showed an improvement meaningfully. The present study argued that duration of treatment was inconsistent and likely slightly shorter in OPT than in MBT. There was not specific data as available in the OPT group on pre-treatment axis I disorder. That's why the study argued that future comparative studies to take axis I comorbidity into account. The another one, the relative cost-effectiveness was not evaluated by the study. Also, the exclusion criteria for the other treatment models are valid and these treatments models should be further tailored to include the more severe cases of BPD. An RCT have started recently that will address the question which dosage of MBT is necessary and (cost-)effective for BPD patients in general and for various levels of severity of BPD in particular. Importantly, the present study was not approved as superior in comparison to other evidence-based psychotherapies which is DBT, SFT, TFP, and CBT. The study claimed that superiority of MBT can be relation with a higher level of treatment integrity based on ongoing training and supervision, adherence measurements, and quality monitoring in the MBT condition. The level of treatment integrity, value of quality systems aiming should give an important for future research. High external validity was identified as a major strength of this study.

Overall, analyzing of the effectiveness of MBT day hospital treatment was aimed for BPD patients and powerful multidimensional effects were observed. These effects were found bigger than those observed in a carefully matched group of BPD patients.

5. Changing from a traditional psychodynamic treatment program to mentalization-based treatment for patients with borderline personality disorder- Does it make a difference? (Kvarstein, Pedersen, Urnes, Hummelen, Wilberg, Karterud, 2015)

Previous studies were found with lack of therapist adherence to MBT therefore the present study claimed that there is an uncertainty about representation of the same treatment approach. According to this argument two research question was based on the aim of the present study: (1) Is MBT as implemented in a Norwegian treatment unit, effective for BPD patients? (2) Is MBT associated with greater clinical benefits for BPD patients compared to a psychodynamic treatment program?

People who are suffering from borderline personality disorder were selected from Department of Personality Psychiatry which has 907 patients with different personality disorders during 1993-2013. The number of participants with borderline personality disorder was 345 in total. Patients had two different identification as 281 of patients treated before 2008 received the traditional psychodynamic treatment while 64 of them treated between 2008-2013 received MBT. During 2004-2006, patients who treated with the transition period (n =16) and randomized controlled trial (n =25) were excluded for this study. All of patients signed a written consent. The procedure was approved by the Norwegian Data Inspectorate and The Regional Committee for Medical Research Ethics. Design of the study was a naturalistic, longitudinal, comparison of treatment effects for BPD patients before and after transition to MBT.

Psychoeducational and group MBT was followed for mentalization-based treatment. A mentalization-based case formulation was shaped for each patient. A maximum treatment duration of 3 years was provided with weekly sessions of individual MBT, 12 sessions in an MBT psychoeducational group, and once weekly MBT dynamic group. Besides

pharmacotherapy was observed by psychiatrist. Therapists were trained for MBT. MBT-ACS was developed to measure MBT adherence and competence for the individual psychotherapy component. The psychodynamic treatment program included day hospital phase, combination of group therapies and long-term outpatient group psychotherapy. Maximum treatment duration was determined as 4 years. Pharmacotherapy was observed by a psychiatrist. Semi-structured diagnostic interviews, the Mini International Neuropsychiatric Interview version 4.4 for DSM Axis-I diagnosis, and the Structured Clinical Interview for DSM Disorders (SCID-II) for DSM Axis-II-R were used for diagnostic status at the start of treatment (baseline).

Outcome measures was calculated around (1) The duration of treatment, (2) The brief symptom inventory 18, Interpersonal problems, and Global functioning. Treatment duration was mentioned as a variable of outcome. The Brief Symptom Inventory (BSI-18) was used to obtain a self-report. For this present study, clinical/non-clinical cut-off score of BSI = 0.8 was preferred. Also, it was implemented to all patients in MBT and it was calculated from SCL-90-R for patients in the psychodynamic treatment. To gain data for Interpersonal problems, The Circumplex of Interpersonal Problems (CIP) which is a short version of the Inventory of Interpersonal Problems-Circumplex version (IIP-C) self-report questionnaire was used. Global assessment of functioning was used to detect score of psychosocial functioning. During the study, the brief symptom inventory, interpersonal problems, global functioning measurements of outcome was repeatedly assessed.

In statistical procedures of the study, Mixed models were used for statistical analysis of longitudinal data, while Chi-square tests were used for statistical comparison of categorical variables at baseline and end of the treatment.

Results of treatment duration and drop-out was that patients in the former psychodynamic treatment had a significantly higher early drop-out rate and shorter average treatment duration

than patients in MBT. In the results of symptom distress, the severity of distress (BSI) analyzed a substantial in both groups and symptom levels were comparable. Long-term improvements of BSI were found significantly better for patients in MBT than patients in the psychodynamic treatment, and large effect size. Results of interpersonal functioning that significantly greater for patients in MBT and effect sizes were large. Results of global assessment of functioning showed that extensive psychosocial problems and differences between treatment groups were significant. And GAF improvements were found greater for MBT patients. Effect sizes were detected large. Self-harming behavior and suicide attempts showed a decline in both groups during treatment and differences between the treatments group were determined as insignificant.

MBT had a higher self-harming frequency than psychodynamic program and dropped from 89% to 27%. Also, for psychodynamic program had a decline of self-harming from 47% to 12%. Suicide attempts decreased from 35% to 6% in MBT and from 25% to 4% in the psychodynamic program. About medication, while neuroleptics were more frequent at baseline end of the treatment it was infrequent in both groups. Use of anxiolytics and mood stabilizers was infrequent at both baseline and the end of the treatment in both groups. During treatment, rate of unemployment reduced in both groups. Rate of living alone and married changed.

Patients with borderline personality disorder showed improvements in the comparison group but benefits were weaker, and symptom and functioning were depending on a clinical range. So that the idea of treating BPD should be reviewed. Focusing on occupational rehabilitation for patient with BPD was founded necessarily and it can be beneficial for the future researches.

This study is the first study about therapist adherence to MBT. There are not randomized, controlled conditions and conclusions for this study. Significant linear deviation was not found. Conclusion for this study was determined as firstly MBT which implemented in Oslo is an effective treatment for people who are suffering borderline personality disorder. Secondly, MBT is found much more associated with greater clinical benefits than a psychodynamic treatment program.



DISCUSSION

This literature review has attempted to understand the effectiveness between borderline personality disorder and mentalization-based treatment with proffered five papers. The common strengths of the research can be indicated as follows. Present five papers were constituted frame of quantitative research method. Furthermore, although three of the studies used mixed model, Linear Mixed Model (LMM) was used by only one study and the other one used paired t-test for statistical analyses. Three of the studies did not add follow-up while two of the studies added. All studies were presented with graphical support. All but one of the studies presented an informed consent to participants. All of them mentioned a background related with aim of the study specifically. In this regard, the consequences of all five studies indicate the meaningful effect between borderline personality disorder and mentalization-based treatment. In the light of the studies, mentalization-based treatment can be identified as promising approach to fix damaged mentalization on people with borderline personality disorder and reducing symptoms.

The first article which is entitled 'Symptom, alexithymia and self-image outcomes of Mentalization-based treatment for borderline personality disorder: a naturalistic study' clearly examined the symptoms of borderline and correlates of effectiveness in MBT (Löf et al., 2018). According to this study, MBT was found effective for borderline personality disorder with regard to improvements in suicidality, self-harm, self-related alexithymia and self-image. Also, the study contributed growing evidence-base on MBT and examined psychological functioning during the treatment.

The empirical results reported herein should be considered in the light of some limitations. The most important limitation is the authors of the study did not add a control group. In that regard, consequences of the study have been seen as uncertainty. And this has led to the

interpretation of results without reliability. Besides, low response rates at follow up made it difficult to analyze. In addition, the change in treatment format during the study period caused negativity in detecting differences. The reason of this limitation was reported as program of MBT for substance abuse. If these patients had not experienced a change in treatment format, consequences of treatment could have been more understandable. The last one, measurement of alexithymia, self-image and attachment remained limited to only self-report. Evaluating them as a result of self-report measurement, it has led to a decrease in the objectivity. To obtain more objectivity, attempt of self-report, other modes of measurement should have used.

On the other hand, some strengths indicate for this study. These can be explained as follows; recruitment of people with borderline personality disorder based on SCID-II interview and ZAN-BPD interview, MBT training for all therapists, including supervision once or twice a year, the dropout rate was found under %15 and it was not different significantly. It means quality of the study is good. Findings from statistical analysis show that a linear mixed model is being used to evaluate all changes on primary and secondary outcomes. Three factors are determined specifically to gain clear output. Age was detected as a factor for self-harm scores because of the rate of self-harm scores was found higher in younger patients. Sexual trauma was showed as a factor with regard to severity symptoms. And eating disorder diagnoses was identified as factor to control Axis-1 comorbidity.

Comparison of MBT with the control group will help to achieve definite conclusions. In this way, a promising future direction can be appeared in that regard studying on systematic treatment selection.

The authors of the second paper which is ‘Impact of clinical severity on outcomes of mentalization-based treatment for borderline personality disorder (Bateman & Fonagy, 2013)’ decided a need for specialist treatment of people with borderline personality disorder after detection of limitations in literature from past to present. For this, comparison of MBT and structured clinical management (SCM) were tested on borderline personality disorder. 134 participants with diagnosis of borderline personality disorder were recruited according to assessment of Structured Clinical Interviews for DSM-IV Axis I and Axis II disorders. Then, participants were distinguished randomly to MBT or SCM. The limitation of this study is that the study was found poor in frame of examination of the present moderating variables. That’s why consequences of this study are not powerful substantially in clinical-decision making. In that regard, comprehensive studies should be proposed. Although patient with more complex personality disorder received MBT, any measurement was not noted to differentiate the degree of mentalization. It caused a wrong evaluation process of change and rising of powerful evaluation needs a specifically designed measurement. In addition, samples were found weak to represent people with diagnosed borderline personality disorder. To sum up, findings remained preliminary.

The third study which noted ‘Mentalization-based group therapy for inpatients with borderline personality disorder: preliminary findings (Brüne et al., 2013)’ presents a six-week combination of DBT and MBT based on changes in mentalization. 16 patients with borderline personality disorder were recruited the study. In addition, the findings are defined as inadequate because of the study is a pilot study. According to Borderline Symptom List (BSL-23) the severity of the symptomatology was measured. Consideration of results was interpreted inside of neuropsychological assessment.

However, the study indicated some limitations. First of all, cognitive and emotional aspects of mentalizing was not measure separately in detail and it leaded a weakness interpretation of data. It should be noted that analyzing of cognitive and emotional aspects of mentalizing separately can be helpful to gain well clinical decision making with regard to interpretation of data. Secondly duration of treatment was kept short. That's why the emergence of the changes was prevented. To observe changes totally, the duration should be long. Lastly a randomized controlled study must be added to gain more effective and strong findings. Also, because attachment styles may vary from person to person, they need to be analyzed carefully on patients with borderline personality disorder. In addition, participate size should be extended to become a strong study. The other side, low dropout rate, graphical presentations of BSL results, combined approach indicate the strengths of the study.

In the present fourth study which is 'Effectiveness of Day Hospital Mentalization-Based Treatment for Patients with Severe Borderline Personality Disorder: A Matched Control Study (Bales et al., 2015)', duration was little bit shorter in other psychotherapeutic treatments (OPT) than in MBT. Therefore, differences of MBT appeared positively.

Incoherent duration of treatment was mentioned as a limitation for this study. Also, Axis-I disorders and cost-effectiveness were not taken comprehensively. In addition, internal validity could not be ensured with matched control design. So that, lack of RCTs was needed.

The last paper which is 'Changing from a traditional psychodynamic treatment programme to mentalization-based treatment for patients with borderline personality disorder-Does it make a difference? (Kvarstein et al., 2015)' has a limitation that there is no randomized or controlled condition. It refers a poor validity of the study as previous studies. With RCTs can be developed results for future and it should be supported with evidence-based studies.

Furthermore, some findings from the study can be found as strengths. For instance, therapists with training with MBT, presenting supervision option, participants from same geography, size of sample, using recommended and advanced statistical methods to eliminate missing data.



CONCLUSION

Roots of borderline personality disorder symptoms are found as a result of bad life experiences such as childhood trauma, childhood neglect or abuse. In fact, environmental factors or genetic factors do not become a cause of borderline personality disorder by oneself. However, if a person has a tendency genetically, bad life or traumatic life experiences can be trigger causes to develop symptoms of borderline. In the light of the findings, etiology of borderline also can lead a damage on mentalization skills. To sum up damaged mentalizing skills can be developed based on variety environmental factors and child experiences such as attachment style, insecure relationship with individuals, traumas, abuse. To fix damages on mentalization of people with borderline personality disorder, mentalizing skills are tried to enhance firstly. The findings from too many studies indicates mentalization-based treatment gives positive consequences as reducing symptoms. That's why improvement of mentalizing skills has been found to be important.

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