DBT as a general approach in forensic psychiatry

- Evaluation of patients’ Global Assessment of Functioning at the Clinic of Forensic Psychiatry in Växjö.

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Abstract

Background: Patients in need of special psychiatric care are admitted to clinics of Forensic Psychiatry. Some of them are women with life threatening self-harm behavior. The suitability of these women’s presence in this environment and the forensic psychiatric clinics’ ability to provide adequate care for them, has been questioned. The main aim of this study was to evaluate the Dialectical Behavioral Therapy approach in the female ward in the Clinic of Forensic Psychiatry in Växjö (n=18). A control group was selected randomly from the other eight wards at the same clinic that do not use this therapeutic approach with their patients (n=25). To measure the patients’ progress, the Global Assessment of Functioning scale was used.

Method: The total number of participants were 43. The statistical model used was mixed design ANOVA. The data were also analyzed using MANOVA.

Results: No significant interaction effect was seen between the progress in GAF in the DBT ward and control wards (partial $\eta^2 = .046$). There was however a significant main effect for the GAF-progress in all wards (partial $\eta^2 = .198$) and a significant difference between GAF1 and GAF2 in the DBT ward. Conclusion: The non-significant interaction effect could be due to a small sample size in the DBT ward. Even though there was no significant statistical difference between wards, the patients had improved their functioning as measured by GAF suggesting that the effect of psychiatric care may still be sufficiently positive.
Introduction

The focus of this thesis was on the care given to the patients at the Clinic of Forensic Psychiatry in Växjö, Sweden. A group of patients who has recently been given attention in media are women with self-harm behavior. They are often young and in need of specialized care that local public caregivers are often not qualified to provide. Self-harming women’s stay in clinics of forensic psychiatry has been criticized (Åkerman, 2009). Åkerman made extensive interviews with female patients who had been treated at the Clinic of Forensic Psychiatry in Växjö and Sundsvall. Although Åkermans research may be scientifically questioned, these qualitative interviews contribute with a unique perspective of those who are within forensic psychiatry. Coid, Kahtan, Gault and Jarman (2000) state that women within forensic psychiatry are a group with special needs. They question the fulfillment of these patients’ special needs and their suitability to be treated in this environment. The authors also claim that the characteristics of female patients with Borderline Personality Disorder who are admitted to forensic psychiatry may form a subgroup with a poor prognosis compared to those admitted to general psychiatry services (Coid et al., 2000). At the clinic in Växjö there is a special unit for female patients with self-harm behavior, which adheres to Dialectical Behavioral Therapy (DBT) as a single approach towards all of their patients. This ward was established in 1989 and today there are over 40 caregivers working in this ward and the ward has a total of 19 beds.

The duration of the stay in forensic psychiatric care is often long and the environment is characterized by high security (Rask, 2002). With respect to these circumstances, some questions may be raised: 1. Is it possible to care for and treat patients under these maximum-security circumstances? 2. Can the patients’ progress in mental health actually be measured? 3. Does the DBT approach make a difference between the results of this ward’s progress in functioning and the other wards”? The purpose of this thesis was therefore to study the therapeutic approach of this ward and to investigate how well the DBT method actually work in comparison to the other wards that do not use DBT.

In forensic psychiatry ward system in Sweden there are multiple types of professionals who meet the patients such as psychiatrists, physicians, therapists,
nurses, attendants and counselors. In this thesis I have chosen to name them all caregivers, because their title is not of particular importance.

Forensic Psychiatry in Sweden

According to Levander (2010) there are 1600 forensic psychiatric patients in Sweden. About one third of them are treated in highly specialized and maximum-security clinics located in the cities of Sundsvall, Säter, Karsudden and Växjö, and two smaller clinics in Vadstena and Västervik. Levander (2010) states that forensic psychiatry is distinguished from general psychiatry in the sense that the length of stay is much longer; forensic patients mean duration of stay is four years. Levander explains that forensic psychiatry has two principal goals: to care for the patient and to protect society. The clinic in Växjö has the status of a regional institution and is allowed to provide treatment for patients in a certain geographical region.

In Växjö the Clinic of Forensic Psychiatry has eight wards with a total of 110 beds. There are three “half way-homes” which are houses detached from the clinic. The half way-homes are used by patients who are at the end of their treatment and need to be cared for in a more open environment. In addition to the wards there is a study and assessment team with different therapies, physiotherapy, education and work training. This is where the patients rehabilitate and are given a possibility to practice their skills to function in everyday situations. The clinics’ caregiving environment is based on the perspective of each patient’s privilege to individually tailored care. The caregiving environment in the female ward has fully concentrated on a daily dialectical behavioral therapeutic approach; no such therapeutic approach was used in the other eight wards so the approach in the other wards is referred to as TAU (treatment as usual). The two conditions, the DBT- and TAU-wards, are similar in some ways, specifically that the patients in both wards, are offered individual therapy treatment by the methods of DBT, ESL, CBT, psychodynamic therapy session, ART (aggression replacement training), and ACT (acceptance and commitment therapy). However, the important difference, the independent variable, is that the DBT-ward is characterized by a climate wherein the patients are approached systematically by the DBT frame of reference. For instance, all staff is trained to act in every situation in ways according to the theory of dialectical behavioral therapy. This systematic approach does not exist in the TAU-wards. The Växjö clinics main mission is to provide highly specialized psychiatric care for those who are in need of
special caregiving and in custody. Their aim is also to provide care based on evidence-based methods.

To be admitted to a forensic psychiatric clinic the patient must be cared for according to the Psychiatric Involuntary Care Act (LPT), i.e. the patient must fulfill certain criteria. The person has to suffer from a serious mental disorder and it must also be absolutely necessary for the patient to be given round-the-clock care. These individuals must have little or no insight into their mental health state and must be a threat to others or themselves. There are two other laws by which one can be admitted to a forensic psychiatric clinic. Criminal offenders who suffer from mental disorder or illness are sentenced to the law of Forensic Psychiatric Care Act (LRV)\(^1\). The criteria to be admitted under this law are the same as for LPT; the difference is that for LRV treatment must not be indispensable, only existing. The third group of patients in the forensic psychiatry clinics are the criminal offenders who during their stay in prison develop a mental illness and must be admitted for treatment temporarily (KvAL/HSL).

**Mental Illness**
Rask (2002) describes three types of mental illnesses that are predominant in forensic psychiatry: psychotic disorders such as schizophrenia, paranoid psychoses and more serious affective disorders; personality disorders such as anti-social, borderline and narcissistic disorders; and drug/alcohol abuse. Rask also mentions that neuropsychiatric disorders, such as autism spectrum disorders have become more common in this context. Studies have shown that 80% of patients diagnosed with borderline personality disorder suffer from a self-harm behavior (Samuelsson, Eidevall, Träskman-Bendz, Öjehagen, & Jensen, 2009). Pathological self-harm behavior can be subgrouped into stereotypic, rough, compulsive and impulsive. The most common behaviors are to cut or mutilate the body with glass or razors, hack the body with pointy objects or burn the body (Klefbom, 2010). According to Samuelsson et al. (2009) these individuals may also attempt to set their hair on fire, swallow needles or other pointy or sharp objects. Lindgren (2011) argues that the individual

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\(^1\) There is a common misunderstanding about this group of inpatients (LRV). This group does not only consist of violent offenders who deliberately injured another human being. It may also be an individual who attempted suicide by setting his or her apartment on fire and accidentally injured someone in the building. This is classified as arson and the person will be admitted by the law of LRV.
often experiences a feeling of emptiness before the self-harming act, but during the
time of the act and afterwards they feel liberated, pleased and sometimes happy and
fascinated by seeing the blood. This behavior can enhance the positive emotion and
reduce the negative affects and symptoms (Samuelsson, 2001).

Treatment
According to Belfrage (1995) the persons who are convicted according to the law of
Forensic Psychiatric Care Act (LRV) are among the few groups within the penalty
system to receive any systematic care at all. Studies have shown no effect of
caregiving until 1989 when Belfrage (1989a) and Boerman (1989, cited in Rask,
2002) found that forensic psychiatric care has a positive effect. But there are varying
results about the crime preventing effect of caregiving. Russo (1994) found that
individuals suffering from psychotic diseases seem to be less prone to relapse into
crime. Craft (1969) states that psychopaths do “surprisingly” well after treatment,
while Bowden (1981) found that psychopaths were the ones who did not do very well
in treatment. Thus, the risk of a psychopath to relapse into crime was small and
unusual. Rice et al. (1992) and Harris et al. (1991b) found that mentally disturbed
patients’ propensity to relapse into crime was less for patients who received treatment
than for patients who did not. In these studies the researchers also found that
psychopaths showed a tendency to get worse after treatment and had a higher
propensity to relapse into serious violent crimes in comparison to psychopaths who
did not receive any treatment at all. According to Belfrage (1995) this is an interesting
issue that could be transferred to a Swedish context. Belfrage interprets the results of
the previously mentioned research: As long as no treatment is given, the patient will
get neither worse nor better. He believes that if treatment is given patients will
improve their mental health, except for psychopaths; who would aggravate and
relapse into crime.

The female ward in Växjö has been using the DBT approach for a few years now.
Some patients are also given individual and group DBT sessions while others are
given cognitive behavioral therapy. Thus, all of the patients are treated with a
dialectical general approach in their everyday situations in the ward. The goal with
this approach is to, with daily conversations, to enhance the patients’ functional
behaviors, and validate their right to their own emotions, thoughts and experiences.
And while the environment is strict, it is made as homelike as possible during the circumstances. Rask (2002) describes the “Ward Atmosphere Scale” (Moos, 1974), which has been widely used to measure the atmosphere in psychiatric wards. Rask (2002) points at the value of conversations and other interactions between caregivers and patients; it has a fundamental role in psychiatric care (Dexter & Wash, 1997; Lövensgard, 1997, in Rask, 2002). Rask underlines that the goal of Swedish forensic psychiatry is to prevent new crimes and especially to minimize acts of violence regardless of whether the acts are directed to themselves or others. Forensic psychiatry also has as a mission to care for the patients and treat their symptoms. Rask describes that the mission for the caregivers is to help the patient to change, develop and recover. This is attempted with several methods such as psychodynamic therapy, milieu therapy, cognitive behavioral therapy, and dialectic behavioral therapy. But there are difficulties related to the physical restrictions in the forensic psychiatric environment. The idea of milieu therapy for example, is to participate in activities in society and for this, a certain degree of physical freedom for the patient is required (Rask, 2002). The author concludes that in treatment of patients suffering from schizophrenia it has been found that the treatment should not only focus on the patient, but also include relatives to increase the patients’ social capacity. A problem in relation to patients in forensic psychiatric is that the relatives are often victims of the patient’s crime. This issue has not been investigated further but should be lifted as a question related to the treatment process. McCann and Ball (2000) explain the forensic environment as a complex workplace with numerous requirements and restrictions. It cannot be stressed enough that the staff treats involuntary incarcerated patients. This often creates resistance against the treatment. Secondly, the authors point out that the patient in forensic psychiatry is often surrounded by a team of caregivers, not only a single therapist, and the patient has narrow possibilities to choose his/her team of caregivers. These caregivers are, paradoxically, not only responsible for the treatment, but also for the security in the ward. However, the treatment programs used within forensic psychiatry are not possible to conduct with involvement of the relatives because of the special circumstances. Instead, they focus on the individual and to support a behavior that is functional.

Cognitive behavioral therapy (CBT) is a generic name for different kinds of psychotherapies with a base in cognitive psychology and learning psychology. CBT has developed a number of subcategories that all have specializations and are used
depending on the patient’s clinical picture. “An Independent Life” (ESL) is a program, which is used to treat people with schizophrenia, but some parts can be used for other purposes. ESL focuses on various areas, for example: stress and vulnerability, early signs of relapse, planning activities, dealing with voices and other delusions, solving conflicts, everyday conversations, and reducing negative symptoms. This model is appreciated for its simplicity and pedagogical structure and for its specific goal. Professor Liberman and caregivers within psychosis care in Sweden and in other countries have developed the content of this program and psychologist Per Borell made the Swedish adjustments. The newest manual – Step-by-Step - (Steg för Steg, 2008) can be used for individual or group sessions.

Dialectic behavioral therapy (DBT) was developed by Professor Marsha Linehan (1991). It is a treatment program for borderline personality disorder (Heard & Gronlund, 2005). The breakthrough came in 1991 when the first study showed results of reduced self-harm behavior in patients treated with DBT (Nilsonne, 2000). A central part of this treatment is to teach individuals with borderline to change their behavior. The goal is to be able to replace all the maladaptive behaviors with other, better skills (Neacsiu, Rizvi & Linehan, 2010). DBT includes a zenbuddistic view of life which means that the patient should attend to his or her own arguments, believe in his or her own value and also accept the present and live consciously in the present. This zenbuddistic view is an important part of DBT and can be helpful for individuals with borderline personality disorder who often have difficulties to see a nuanced image of reality and to understand that very few things are constant, especially emotions (Stiftelsen Allmänna Barnhuset, 2004). DBT has primarily been used for individuals with impulse, emotion and relationships adjustment issues. A central part of the therapy is to give the patient motivation to live and cease self-harm behavior. The method can also be used for treating substance abuse, posttraumatic stress disorder, binge-eating disorder and aggression management (Kåver, 2006). Lindgren (2011) argues that DBT has showed promising results but that the method should be further examined and especially in a Swedish context. Andersson, Öst and Waern (2006) point to the effect of DBT in comparison with regular caregiving treatment, also called TAU (treatment as usual). Alper and Petersen (2001) describe a study where fifteen women diagnosed with borderline personality disorder and with self-harm behavior during four weeks were given DBT. The aim of that study was to investigate the effect of DBT on self-harming acts. Quantitative data was retrieved
from medical journals before and after the treatment. The results showed that the self-harming acts diminished with 50%. During two years, McCann and Ball (1994-1996) compared twenty-one DBT patients and fourteen TAU patients. The results showed that it is possible to significantly reduce the patients’ maladaptive interpersonal strategies to cope with emotions, relationships and hostile affections with DBT. The fourteen patients who received TAU showed no such results. James, Taylor, Winmill and Alfoadari (2008) and Larsson et al. (2006) have also found that DBT is a promising treatment as they found a decrease in self-harming acts. Roepke et al. (2010) found that DBT has a significant effect on the facets of self-esteem and self-concept clarity in women with Borderline Personality disorder (BPD). Further on, Guttling et al. (2010) found in their Dutch study that DBT in a group context significantly changed the patients’ symptoms. They were less depressed, showed less anxiety and anger, less obsessive-compulsive symptoms and less suicidal thoughts and other psychiatric symptoms.

An issue that should be considered is comorbidity. Patients often suffer from more than one mental disorder. One could imagine that this would cause difficulties in therapy but Ritschel et al. (2012) found that DBT significantly reduced the patients’ anxiety and depressive symptoms even in cases of comorbidity. However, it must be said that the implementation of DBT is rather demanding for caregivers since they must alternate between a flexible, open and motivated attitude towards the patient and sometimes show a neglecting, intolerant and provoking attitude towards the patients’ dysfunctional behaviors (Linehan, 2000).

Clinical Approval
Approvals from Chief Medical Officer and Chief of Operation were given to compare patients in the DBT ward and a randomized selected comparison group. No information that could identify individual patients was included in this study.
Method
Participants and Procedure
The aim of this study was to evaluate the effectiveness of DBT in forensic psychiatry by comparing the female ward, which uses DBT as a thematic approach with all their patients ($n=18$) and the other wards ($n=25$), that do not use DBT but a TAU approach (Treatment as Usual). In this thesis the female ward is called the DBT ward and the other wards are called TAU wards. The control group was selected randomly from other wards (Tabachnick & Fidell, 2007). In the analysis, statistical power was calculated with a medium effect size, an alpha level of .05 and a power level of .80 (Cohen, 1988).

Table 1. Age

<table>
<thead>
<tr>
<th></th>
<th>$n$</th>
<th>$m$</th>
<th>std.</th>
<th>male</th>
<th>female</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBT ward</td>
<td>18</td>
<td>25.94</td>
<td>7.25</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>TAU ward</td>
<td>25</td>
<td>35.76</td>
<td>9.90</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>31.65</td>
<td>10.0</td>
<td>25</td>
<td>18</td>
</tr>
</tbody>
</table>
Table 2. Primary Diagnoses \((n)\)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>DBT ward</th>
<th>TAU ward</th>
<th>male</th>
<th>female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality Disorder</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Psychotic Disease</td>
<td>0</td>
<td>9</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Neuropsychiatric Syndrome</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Cognitive Disorder</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

GAF as a measurement tool

Global Assessment of Functioning is a 100-point scale which reflects the patient’s current overall occupational, psychological and social functioning. It is not supposed to reflect the physical limitations or environmental problems. A score is documented as a single number on the 100-point scale. The advantage of this scale is its possibility to subjectively track changes in a patient’s level of functioning over time (Morrison, 1995). GAF has proven to be a reliable and valid measure of psychiatric disturbance in a sample of severely mentally ill (Jones et al., 1995; Sonesson et al., 2010). See appendix A.

Measures

The comparison was evaluated in terms of GAF. The GAF-score is estimated approximately once every sixth week during the patients’ health conference. The score is almost exclusively settled by a physician who knows the patient well, but there are also other caregivers who are qualified to settle this score and they must have gone through extensive training. The patients’ GAF-score for the four most recent assessments within their stay at the ward was noted. Since the scores are settled every sixth week, the individuals from the randomized selection who did not fulfill the criterion of having four scores, were automatically excluded and replaced with another randomly selected individual. The variables considered were age, GAF scores from a least four assessments and primary diagnosis. All eighteen patients in the DBT ward fulfilled the criteria of having at least four GAF-scores. During the study it was discovered that far from all patients had been given GAF scores regularly every sixth week. An issue concerning the sample was that the time of admission was different between wards. In the DBT ward there were only a few individuals who had been
admitted for more than a year, the rest of the DBT patients had been admitted for a few months. In contrast to this, in the TAU wards the majority of the patients had been admitted for more than five years and a few had been admitted over decade.

Analysis

The collected data was analyzed with the Statistical Package for the Social Sciences (SPSS), version 18. A standard Mixed Design ANOVA was performed with Global Assessment of Functioning as the dependent variable and ward as independent variable. The hypotheses were:

H₀: There is no significant difference in mental health progress as measured by GAF-values between the DBT ward and TAU wards.

H₁: There is a significant difference in GAF-progress between the DBT ward and the TAU wards.
Results
A mixed between-within subjects analysis of variance and a MANOVA were conducted to assess the impact of two wards’ therapeutic approach (DBT ward and TAU wards) on the patients’ GAF scores across four measurements. Prior to performing the analyses, all variables were screened with programs in SPSS in search of data entry problems, missing values, outliers, normality, linearity, sphericity, multicollinearity and singularity. Mauchley’s test of sphericity was significant for the interaction effect ($p=.02$), however, after corrections by Greenhouse-Geisser and Huynh-Feldt there was no longer a threat to sphericity for the dependent variable GAF. After this correction all the assumptions were met.

Figure 1. GAF-scores from four registrations, separated for DBT and TAU wards. Line in the center representing the grand mean = 41.2
The aim was to study any differences in GAF between the two groups. The results from Mixed design ANOVA showed that the first GAF score (GAF1) was significantly different between wards, which might indicate that the DBT approach may have a moderate but helpful effect during the initial period of a patient's stay in the ward (Table 4).

The main effect comparing aggregated GAF-scores (GAF1-GAF4) between two types of ward was not significant, $F = (1.41) = 1.87$, $p = .178$, and suggests no overall difference in GAF between the two wards approaches (Table 5). However, the effect size is $\eta^2 = .044$ which was considered a small-moderate effect size (Cohen, 1988). Nevertheless, the $p$-value indicated that $H_0$ was true; there was no statistical difference in mental health progress as measured by GAF-values between the DBT ward and TAU wards.
Table 5. Main effect, comparing two wards

<table>
<thead>
<tr>
<th>Contrast</th>
<th>$F$</th>
<th>$p$</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.878</td>
<td>.178</td>
<td>.044</td>
</tr>
</tbody>
</table>

Table 6 describes the main effect and interaction effect of GAF when both wards were considered together. The result was that GAF has a significant main effect, independent of ward. The interaction effect was not significant.

Table 6. Main effect and interaction effect from Mixed ANOVA

<table>
<thead>
<tr>
<th></th>
<th>$F$</th>
<th>$p$</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAF</td>
<td>3.205</td>
<td>.034</td>
<td>.198</td>
</tr>
<tr>
<td>GAF*WARD</td>
<td>.625</td>
<td>.603</td>
<td>.046</td>
</tr>
</tbody>
</table>

An interesting outcome was that being cared for in the DBT ward explained 18% of the difference between GAF1 and 2, while the corresponding figure in the TAU group was 1.7%.

Table 7. Differences between GAF1-2 measurements separately for wards.

<table>
<thead>
<tr>
<th></th>
<th>$F$</th>
<th>$p$</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBT ward</td>
<td>3.789</td>
<td>.068</td>
<td>.182</td>
</tr>
<tr>
<td>TAU ward</td>
<td>.427</td>
<td>.520</td>
<td>.017</td>
</tr>
</tbody>
</table>
Discussion
This study was conducted to extend the research on the approach of dialectical behavioral therapy in a thematic caregiving environment in comparison to an undirected approach used in a forensic psychiatric environment. It was hypothesized that there would be a difference in GAF-scores between the DBT ward where a dialectical approach was used compared to other wards. No such statistically significant difference was noted ($r^2 = .044$) between wards. This could be due to small sample sizes and one can speculate that with a larger sample, the results may have been significantly different. The sample size was considered before starting the study because of the limitations in the DBT ward, there were rather few patients in that ward. Another factor that may have had an impact on the result is from what criteria the patients were selected. However, due to the small number of patients, there was a mix of diagnoses. One can discuss if it would have been more appropriate to limit the selection to only include personality disorders and neuropsychiatric disorders even though this would have made the sample even smaller.

The first finding was that there was no significant interaction effect. The individuals in the TAU group might have been admitted for a longer period of time and may have come further in their rehabilitation process and progress in GAF in comparison to the patients in the DBT ward. This might be due to the differences in LRV and LPT and the length of stay in forensic psychiatric care. The law states that when an individual who is cared for within the law of LPT is considered recovered from a mental illness, the person cannot be held any longer and is released, while in cases of LRV the patient has committed a crime and an eventual release must be considered by a general court of law. This study did not consider the patients’ date of admission or length of stay, and this should be considered as a possible effect on the results. During the study is was discovered that the patients in the DBT ward had not been admitted for as long as the TAU patients, which automatically meant that the GAF1 scores were lower in the DBT ward since they were settled at the time of admission, while the TAU wards GAF1 were not in the beginning of their treatment period. Due to the methodological issue of patients’ time of admission, it is difficult to draw conclusions of the effect of treatment in this study.
Something that also might have had an effect on the results of showing non-significant results for the interaction effect between ward and GAF score is the problem with DBT in an organization filled with challenges such as the Clinic of Forensic Psychiatry in Växjö. The caregivers often have little or no mental health treatment experience, no behavioral therapy training and no experience in using the DBT material and models to meet each individual special needs. This is an important issue concerning the implementation of DBT in the organization, which causes large expenses for the organization. The strategies may not be implemented enough in the unit to make a difference between wards. In fact, all the staff in the DBT ward has after the execution of this study gone through a course in DBT approach to extend their knowledge in working with a dialectical approach. Furthermore, most research about DBT in relation to psychiatry is done in an outpatient environment, not within the forensic psychiatry. That might have been a crucial circumstance, which made the outcome in this study different from research. Also, researchers point out the importance of conducting further studies on the subject in a Swedish context, just because of the lack of research.

However, the results showed a significant main effect for GAF scores overall. This indicates what Belfrage (1989a) and Boerman (1989) (cited in Rask, 2002) found in their studies; that forensic psychiatric care does have a positive effect. In this study that effect was measured in GAF and surely one could state that the patients ability in question of functioning is improved during their stay in the clinic, independent of ward. And highly interesting is what the results showed in table 7 and graph 1. If a patient is treated in the DBT ward, it explains 18% of the difference in GAF between score 1 and 2. In the other wards that do not have a specified approach, the corresponding value was found to be as small as 1.7%. The problem is that since the time of admission was not noted, it is not possible to state that the two first measurements actually were made at the beginning of treatment period for the patients in the DBT ward and after several months or even years for the TAU wards. Regardless of the difference between wards, something in the DBT ward does make a difference for the individuals in this ward. Something is having a life changing impact on these individuals during a period of time. It may therefore be valuable for this clinic to further evaluate this approach over time and follow up their patients over time.
References


Appendix A. Global Assessment of Functioning (GAF) Scale

Consider psychological, social, and occupational functioning on a hypothetical continuum of mental health-illness. Do not include impairment in functioning due to physical (or environmental) limitations.

**Code** *(Note: Use intermediate codes when appropriate, e.g., 45, 68, 72.)*

100 - 91 **Superior functioning in a wide range of activities, life’s problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.**

90 - 81 **Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., an occasional argument with family members).**

80 - 71 **If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g., temporarily falling behind in schoolwork).**

70 – 61 **Some mild symptoms (e.g., depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within household), but generally functioning pretty well, ha some meaningful interpersonal relationships.**

60 – 51 **Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts peers or co-workers).**

50 – 41 **Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).**

40 - 31 **Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed, avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home and is failing at school).**

30 – 21 **Behavior is considerably influenced by delusions or hallucinations OR serious impairment, in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g., stays in bed all day, no job, home or friends).**

20 – 11 **Some danger of hurting self or others (e.g., suicide attempts without clear expectation of death; frequently violent; manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces) OR gross impairment in communication (e.g., largely incoherent or mute).**

10 – 1 **Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.**

0 **Inadequate information**