

## Desensitization of conflicted feelings: using the ATOS to measure early change in a single-case affect phobia therapy treatment

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### Summary

**Aim.** This single-case study investigated adaptive shifts in behaviour observed in the early stage of a successful course of Affect Phobia Therapy (APT), a form of Short Term Dynamic Psychotherapy (STDP) with the goal to discover whether early gains could be made by a patient presenting with anxiety, relationship difficulties, and low self-worth, and what mechanisms of change would facilitate these gains.

**Methods.** Eight early sessions were rated using the Achievement of Therapeutic Objectives Scale (ATOS), which measures the extent of beneficial effects of therapy achieved by the patient. Patient symptoms and functioning was assessed using the Symptoms Checklist 90 Revised (SCL-90-R), the Inventory of Interpersonal Problems (IIP) and the Rosenberg Self-Esteem Scale (RSE). It was hypothesized that exposure to conflicted feelings would lead to desensitization (i.e., the conflicted feeling being tolerated with reduced levels of anxiety or shame).

**Results.** Results confirm that desensitization did occur and strong improvement was noted by session 10 on all measures.

**Conclusions.** Findings suggest that significant changes can occur early in therapy and the key mechanisms of change are exposure to warded off feelings and lowering of inhibition. These findings are of interest in light of the current trend towards brief therapies and the search for mechanisms of change.

ATOS / affect phobia model / short-term dynamic therapy / psychotherapy process

### INTRODUCTION

Research clearly supports the idea that psychotherapy is effective [1, 2]. The question still remains, however, as to what makes psychotherapy work. To date, much of psychotherapy

research has focused on the interventions that the therapist has offered or the amount of therapy the patient has received (e.g., number of sessions, or number of specific interventions). For example, the therapeutic alliance is among the few factors which have consistently been shown to impact on outcome accounting for approximately 22% of the variance [3], however, overall, how different interventions work or what effect they have on patients and patient in-session response to treatment has traditionally been focused on less. Greenberg [4] suggests that one of the major problems with current clinical trials is their failure to account for the absorption of treatment when evaluating the effects of dif-

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ferent treatments on outcome. Greenberg urges for the study of the link between patient change process and outcome, and for the effects of particular processes to be demonstrated. In order to evaluate the effects of psychotherapy, not only do we need to know whether the therapist made a particular intervention, but we also need to know whether the patient heard the intervention, felt the emotional implications, and then behaved in some way to indicate that the intervention had an impact [5].

Detailed exploration of change mechanisms may provide data relevant to another question of interest in current psychotherapy research: the psychotherapy dose-effect relationship [6]. The influence of time-limited psychotherapy and a move towards shorter therapy services makes this question of pivotal importance to service providers [7]. Although therapy has generally been found to be effective, data is inconclusive with regards to the amount of therapy necessary to attain desired outcomes [8]. However, research on the dose-effect relationship in psychotherapy starting with Howard et al [6] has clearly pointed to the significance of early change, and the need to examine session-by-session outcome in the early stages of therapy [9,10]. Understanding early changes in treatment and identifying the change mechanisms at play during this important period of therapy is of great significance for researchers and specially important to clinicians who, in this managed-care era, are under pressure to provide effective relief in the shortest time possible.

### AIM OF THE STUDY

The present study aims to shed some light into the link between patient change process and outcome. Moreover, in light of the significance attributed to early change in existing research, this study will focus on the first ten sessions of therapy in an attempt to clarify what change occurs in this crucial period in treatment. More specifically, this study will assess the degree of activating and inhibitory feelings and their relationship to the patient's improvement in the first ten sessions of treatment.

### METHODS

#### Patient, Treatment, and Therapist

This study is based on the first 10 sessions of a 21-session Short Term Dynamic Psychotherapy (the Affect Phobia model [11]) of a 30-year old female entrepreneur who came to treatment due to problems of anxiety, issues in relationships, and lack of self worth. At the initial evaluation, the therapist gave the patient an Axis I diagnosis of anxiety disorder NOS, an Axis II diagnosis of personality disorder NOS, and a GAF rating of 62. The patient reported having a family that did not "do feelings," meaning that her family was not emotionally expressive, and she was discouraged from expressing her own feelings. In spite of this, the patient reported that her family was caring and fun loving, and this made it very difficult for her to face her anger at them and to accept that her anger towards them was justifiable. Even so, in therapy, the patient faced her anger towards her family, and did so quite quickly; afterwards reporting tremendous changes. She then had to deal with a crisis in identity because her changes were so profound and impacted on her entire sense of self and relation to others. The bulk of the changes in treatment were reported to have been achieved in less than ten sessions.

The APT version of STDP is based on the hypotheses that "affect phobias," or fears of feelings are fundamental issues underlying many Axis I and Axis II disorders [11]. In this therapy, affect phobias are resolved through a system of graded exposure to the feared but underlying adaptive 'activating' affect until the anxiety subsides. Patients are encouraged to gradually experience increasing levels of previously avoided 'activating' affect while reducing anxiety or other inhibitory affects to a manageable level. The goal is to help patients face and tolerate the 'activating' affects (such as grief, anger/assertion or closeness) that were previously warded-off and unbearable by reducing the associated 'inhibitory affects' of anxiety guilty, shame or pain [12]. Thus the fundamental mechanism of change in STDP/APT therapy is the desensitization of feared and warded off feelings. The goal of this therapy is to resolve the conflicted feelings or 'affect phobias' to enable the pa-

tient, for example, to grieve without shame, feel assertive anger without anxiety, or feel a healthy sense of self confidence without guilt.

The therapist was a female clinical psychologist. She is the director of the Short-Term Psychotherapy Research Program at the Harvard Medical School (BIDMC) and has over 25 years of clinical experience and training in STDP.

### Outcome Measures

*The Symptoms Checklist 90 Revised* [13] (SCL-90-R) asks patients to rate, on a scale from 0 to 4, the amount of distress that they have experienced from each of the 90 symptoms. It provides scores on 9 subscales including specific subscales of depression (DEP) and anxiety (ANX) and a summary score, the Global Severity Index (GSI), which is an overall index of distress. The SCL-90-R has acceptable reliability and validity [13].

*Inventory of Interpersonal Problems* [14] (IIP) is a 127-item self-report instrument that identifies a person's most salient interpersonal problems. Items are scored on a 5-point Likert Scale. The IIP has well accepted reliability and validity [14].

*The Rosenberg Self-Esteem Scale* [15] (RSE) is the most widely used self-esteem measure in social sciences research. The RSE examines the positive or negative orientation toward oneself, or an overall evaluation of one's worth or value. The scale contains ten items scored on a 4-point Likert scale. The scale ranges from 0-40, with 40 indicating the highest score possible. There are no discrete cut-off points to delineate high and low self-esteem. Studies have reported acceptable reliability and validity [16].

### Process Measure: The ATOS

Patient's absorption of treatment was measured by intensive evaluation of videotapes of therapy sessions with the Achievement of Therapeutic Objectives Scale (ATOS) [5].<sup>5</sup> The ATOS measures the extent of beneficial or therapeutic effects of therapy that the patient is assimilating. It is designed to assess the degree to which theory-driven, and clinically relevant treatment

objectives are realized by patients within and across sessions [17].

Although the therapeutic objectives assessed by the ATOS were developed from observation of dynamic psychotherapy sessions, the resulting seven objectives were operationally defined in behavioural language and overlapped significantly with well-established 'common factors' believed to play a role in therapeutic change [17]. This overlap not only suggests that the ATOS can be used to evaluate psychotherapies of a variety of theoretical orientations, (as demonstrated in McCullough and Magill [12]) but also, it suggests that the ATOS can provide valuable data for analysing the what, where and how these factors are played out in therapy [12].

The seven treatment objectives measured by the ATOS are as follows:

1. *Defence Recognition* (Insight): Measures the degree to which patients recognize and understand their own pattern of defensive behaviour or maladaptive cognitive schemas.

2. *Defence Relinquishing* (Motivation): Reflects the degree to which the patient is motivated to change or to give up the defensive behaviour or maladaptive cognitive schemas.

3. *Affect Experiencing* (Exposure): Measures the degree of the patient's emotional arousal of the adaptive affect during the session, whether consciously experienced by the patient or based on visible physiological signs. The degree of arousal can also be thought of as a measure of the degree of desensitization of conflicted (phobic) affects.

4. *Affect Expression* (New Learning): Measures the degree to which the patient has learned to express adaptive thoughts and feelings in face-to-face interactions outside of therapy or (if relevant) with the therapist in session.

5. *Anxiety, Guilt, Shame, or Pain* (Inhibition): Reflects the degree to which inhibitory affects interfere with affect experiencing.

6. *Sense of Self* (Self Perception): Measures the degree to which the patient has a positive or constructive sense of self. This is reflected in an adaptive view of self in terms of pride in positive qualities and acceptance of own realistic limitations, care for self, self confidence, interest in self needs, and healthy self-esteem.

7. *Sense of Others (Alliance and Relations)*: Measures the degree to which patients are able to acknowledge and respond to others in positive ways. In the case of conflict or abuse, it measures the degree to which the patient is able to respond adaptively to negative or destructive qualities in others.

Of the factors measured by the ATOS, exposure and inhibition have been found to be the most strongly associated with improvement. More specifically, exposure to the adaptive affect and the reduction of inhibitory feelings best predict positive outcomes [12]. Furthermore, the composite factor to best predict improvement in STDP as well as in cognitive therapy (CT), is the factor of *desensitization* [18]. The amount of desensitization is obtained by subtracting the amount of inhibitory feeling from the level of activating feeling that the patient is experiencing. An example of desensitization would be the ability to cry when sad, but not feel overwhelmed with shame. Another example would be the capacity to feel anger and to use it to assert oneself instead of feeling guilt for being angry at someone and shutting the feeling down. Research has shown that by the end of treatment, improved patients in both STDP and CT were more desensitized to conflicted feelings when compared to patients who had not improved [18].

With the ATOS, videotapes, audiotapes, or transcripts of psychotherapy sessions are reviewed in 10-minute segments, and ratings are made at the end of each segment for the first five objectives. Objectives for change in sense of self and others are only rated once, at the end of the entire session, since often there is too little data to rate these objectives every ten minutes [5]. Ratings for all subscales are on a 1-100 scale same in format to the Global Assessment of Functioning Scale, with higher ratings representing more adaptive behaviour, except for inhibition, in which lower ratings represent more adaptive behaviour (i.e. less inhibition). The rating of each objective is based on the predominant adaptive affect in the segment being rated. The authors report that the most frequently seen affects in STDP involve the adaptive forms of anger/assertion, grief/sadness, closeness/tenderness or attachment to others, and positive feelings about the self; however other adaptive affects rated may include interest/excitement,

joy, sexual excitement. Research supports that a wide variety of raters can reliably rate the ATOS objectives [17].

### Raters

For this study, raters consisted of three graduate students at McGill University who received training on the ATOS. Raters first practised through Jakobs ladder (<http://www.jakobs ladder.com/>), an interactive on-line tutorial designed to help trainees learn the ATOS. On Jakobs ladder, raters have the opportunity to practice using the ATOS scale by rating on-line transcripts of sessions. Raters receive feedback in the form of "Gold Standard" ratings accompanied by commentary explaining why the ratings were made. Once the raters felt proficient, they moved to reliability testing which involved viewing videotaped sessions consisting of 20 ten-minute segments. Each rater viewed the segments, made ratings and compared their scores to the "Gold Standard" ratings. Reliability was determined by calculating the Intra Class Coefficient (ICC 2, 1). The three raters achieved reliability coefficients of .65, .71, and .71 putting them all in the moderately reliable range for rating the ATOS.

### Procedures

The patient was administered a standard battery of tests during the intake session, the half-way point of treatment (Session 10), and at termination. Due to the interest in early change, the present study examines sessions up until the second administration of the test battery at session 10. With the patient's permission each session was videotaped. Due to technical problems with videotapes, only 8 out of 10 sessions were accessible for rating (sessions 1, 2, 3, 4, 5, 6, 9, and 10). For the ATOS ratings, videotapes of the psychotherapy sessions were reviewed in 10-minute segments and ratings were made at the end of each segment for the main treatment objectives.

In order to control for rater-drift, the first 10-minute segment of each session was rated by two raters. If both raters scored each sub-scale within an acceptable range in the first segment

then the designated rater would rate the remainder of the given session on his/her own. The acceptable range used to control for drifting was a ten point range; the same as that suggested by McCullough, Kuhn, Andrews, Valen and colleagues for reliability testing of the ATOS[17]. If both raters were not within the acceptable range in the first segment then another ten minute segment was rated by both the raters until both were within the acceptable range. Additionally, all raters were blind to what session of therapy was being rated to minimize any biases that may have impacted ratings and the sessions were randomized to ensure that no rater rated back-to-back sessions.

## RESULTS

### Pre- and Mid-Treatment Measures

The first set of analyses reports the level of improvement in the patient's symptoms, interpersonal problems, and self-esteem by comparing the IIP, the SCL-90-R and the RSE at the intake and again at mid-treatment. On the SCL-90-R, the patient moved from the psychiatric range at pre-treatment to the non-psychiatric range at the midpoint of therapy on the GSI (2.04 to .93), the DEP index (2.46 to 1.00), and the ANX index (2.60 to .90)[13]. On the IIP, the patient also moved from a psychiatric range at pre-treatment ( $M=2.04$ ) to the normative range by the midpoint of therapy ( $M=.91$ )[15]. On the RSE, the patient's score increased from 24 at pre-treatment to 33 at mid-treatment. Given that the highest score possible is 40, a score of 33 represents an overall high self-esteem.

### ATOS Ratings

The most common affect focus was Anger/Assertion rated on 25 of 53 segments, followed by Positive Feelings Toward the Self (19 segments), Sadness/Grief (5 segments), and Closeness to Others (4 segments). Mean scores for the ATOS indicate that the patient achieved very good recognition of problem patterns (*Insight*:  $M=70.27$ ,  $SD=12.64$ ), strong motivation to give up maladaptive behaviour (*Motivation*:  $M=60.86$ ,

$SD=12.81$ ), moderate experience of emotion (*Exposure*:  $M=45.24$ ,  $SD=23.89$ ), moderate adaptive expression of thoughts, feelings, wishes and needs (*New Learning*:  $M=48.70$ ,  $SD=25.40$ ), moderate inhibition of adaptive thoughts and feelings (*Inhibition*:  $M=57.13$ ,  $SD=21.10$ ), a very adaptive sense of self with much compassion and acceptance but some self-blame and shame present (*Improvement of the Image of Self*:  $M=63.5$ ) and a very adaptive sense of others with much compassion, trust, and acceptance but some devaluation/idealization (*Improvement in Image of Other*:  $M=73.75$ ).

For *Exposure*, mean scores alone fail to capture the depth of emotional experiencing, so peak scores should also be considered as they better reflect the intensity of affective arousal [19]. Although on average the results indicate that in the first ten sessions *Exposure* was in the moderate range, the exposure scores across the ten sessions ranged from 3 to 96, with the peak score occurring during session four, when the patient fully and vividly experienced anger towards her father. This anger was in the form of full murderous rage as the patient described in vivid detail a fantasy of how she would use the physiological feeling of anger (described by the patient as "energy") in her body. When asked by the therapist what the impulse would want to do, the patient explained that she could feel herself "kicking him so hard," until it killed him. Thus, her exposure to the adaptive affect of anger was rated very high ( $Exposure=96$ ). It is important to note that murderous rage, although obviously not adaptive in reality, is considered adaptive if experienced purely in fantasy during therapy. This way, the patient is able to experience the feeling without truly acting on it. Therefore, patients see they do not have to *act* on their feelings. Experiencing anger to its fullest capacity not only allows the anger to pass, but it also opens the door to experiencing other feelings, such as grief and closeness. Once the patient allowed her anger to be felt towards her father, as opposed to keeping it bottled up and blaming herself, she felt deep sadness for hurting him and deep closeness towards him. In fact, during session four, anger, grief, and closeness were all felt to a strong degree.

After session four, the patient began to make strong shifts in her behaviour. She was build-

ing her self-worth and was allowing herself to be more assertive and “real” with other people. No longer was she as afraid to ‘rock the boat’ and stand up to significant others in her life. Through this shift came a scary thought: if she had always kept her emotions bottled up and had ‘faked it’ throughout her relationships, then what was real? This was the focus of session six and the result was a session with high levels of anxiety and inhibition.

The next peak (*Exposure* = 90) occurred during session nine, in which the patient, after experiencing the loss of her grandfather, was able to achieve some emotional integration. The patient experienced her sadness about the loss, but also acknowledged the presence of angry feelings towards her grandfather. Initially the anger was accompanied by immense guilt and was turned inwards against the self. By the end of the session however, the patient was able to feel justified in her anger and compassionate towards both herself (for her feelings) and her grandfather (for his actions).

Peak *Inhibition* scores (lowest inhibition) were also examined. Theory suggests that the relationship between exposure and inhibition is such that exposure to warded-off adaptive affect will result in lowered inhibition. Over the ten sessions, inhibition ranged from 95 to 10, with the lowest rating taking place during session 10, in which the patient experienced a great sense of joy and relief for having grieved her grandfather’s death with her family without holding back her sadness. The second lowest peaks in *Inhibition* occur in sessions four and nine (*Inhibition* = 21); not surprisingly the sessions with peak *Exposure* scores.

### Desensitization

To further examine the relationship between *Exposure* and *Inhibition*, desensitization scores were generated for every session rated. Desensitization was defined as the ratio of level of activating feelings to the level of inhibitory feelings. As can be expected, desensitization was initially low. (Anxiety, shame and guilt were high while adaptive anger, grief and self esteem were low). During the initial evaluation, the patient expressed that she was “emotionally orphaned”

by her parents and began to acknowledge anger at her father. She however reported fear and anxiety about “rocking the boat” and breaking down the family structure. In the second session, the patient successfully confronted the anger at her father and “rocked the boat”, bringing the exposure score higher. However, immense fear was still reported about her “stronger” anger towards her mother, and thus, overall, there was only slightly more exposure than inhibition. A sharp decline in desensitization occurred in the third session. In this session the focus shifted from anger to compassion and positive feelings for the self. The patient struggled throughout the session to experience positive feelings towards herself, and when she managed to do so, these feelings were highly inhibited – she felt undeserving. In session four, desensitization peaked when, as described above, the patient fully and vividly experienced her anger at her father with little inhibition, and was able to integrate grief for hurting her father and closeness towards her father.

At this point in the therapy, the patient reported that changes had occurred and that she was no longer afraid to “rock the boat”. In session five, the focus became learning how to deal with expression of feelings with others, as well as dealing with family and friends who might not like her growth and change. Following, in session six, desensitization dipped down again as the patient questioned what was really real in her relationships if she had always kept emotions bottled-up and been “fake” and became frightened and anxious. In session nine, there is both very strong affective arousal, and strong inhibition, since, as mentioned above, the patient in this session struggled to integrate feelings of grief, anger, and compassion after the death of her grandfather. Finally, in session ten, desensitization is quite high; although still lower than at session four (Fig.1 next page).

### DISCUSSION

Our analysis using the ATOS suggests that the patient was able to considerably assimilate the treatment objectives of STDP/APT in a relatively short period of time (10 sessions). Furthermore, our results indicate that through the course of

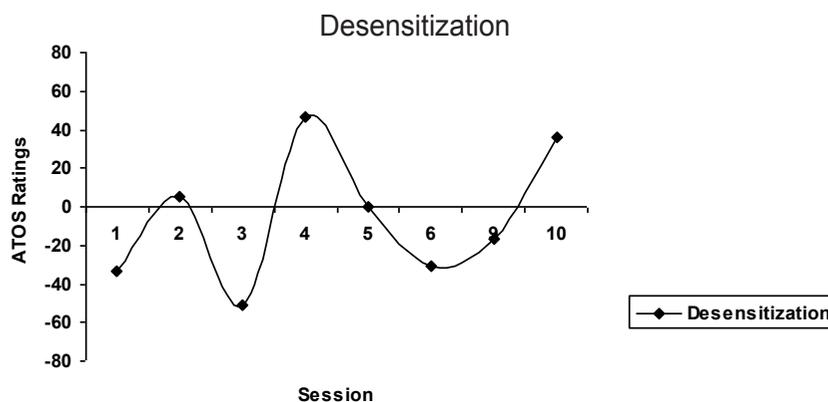


Figure 1. Amount of Desensitization per session

these ten sessions of therapy the patient made significant improvements on the presenting problems. Given the relationship between the attainment of the treatment objectives of STDP and positive therapeutic outcome, these results offer support to the use of STDP in the treatment of anxiety, depression and low self-worth.

As previously mentioned, the variable specific to STDP that most strongly predicts outcome is the exposure to warded off 'activating' feelings[12]. The Trondheim Psychotherapy Research Program (TPRP), in Trondheim, Norway, has been using the ATOS to analyse a clinical trial comparing STDP with Cognitive Therapy (CT). They have found that that by the end of treatment, improved patients in STDP are more desensitized to conflicted feelings (activation/inhibition ratio = 2/1) when compared to patients who have not improved (ratio = .6/1)[12]. The TPRP research found that improved patients experienced, when intensity of feeling was averaged across each ten minute segment, a low-moderate level of feeling (38 on the ATOS). The average intensity of feeling for the patient in this study was 45.24 on the ATOS. The level of activating feeling was significantly correlated with outcome at termination and two year follow-up which lends support to the importance of activating feelings in psychotherapy [18].

Beyond exposure to warded-off feelings, the composite variable that best predicts successful outcome has been the amount of desensitization [18]. Desensitization occurs as the patient engages in a gradual process where he or she comes to tolerate previously unbearable affects through a process of "successive approximations" or stepwise increments of feeling are

borne as opposed to "flooding" (in which high intensity of feeling is elicited). In our study, the changes made by the patient seem to support the theory of change proposed by the Affect Phobia model of STDP. At the beginning of therapy the patient displayed high levels of inhibition, and throughout the first ten sessions, activation increased and inhibition decreased so that she went through increasing levels of desensitization as she was exposed to conflicted feelings (i.e. anger towards her father which peaked at session four and the anxieties surrounding changes in her identity in session six).

This study suggests significant changes can occur within only as few as ten sessions.

However, this study does not examine later stages in therapy, and therefore it would be important to examine whether the changes observed at session ten were maintained over the entire course of the treatment, and beyond. Future research could examine the long term impact of this fast occurring change, as well as whether different mechanisms are at play at later stages of therapy. A large focus of the therapy sessions observed in this study was exposure to conflicted feelings; but perhaps examination of the later stages of therapy would reveal a shift in focus to a different factor, like for example *New Learning*, which refers to the degree to which the patient has learned to express adaptive thoughts and feelings in face-to-face interactions outside of therapy or (if relevant) with the therapist in-session.

Further research could also focus on the role of different therapeutic objectives at play in APT therapy as well as their interactions. For example, the patient in this study demonstrated fair-

ly high levels of *Insight* and *Motivation*; both of which were present from the beginning of therapy. It has been suggested that *Insight* and *Motivation* are slightly predictive of outcome in STDP. Further examination of how *Motivation* and *Insight* modulate desensitization in APT would add to the understanding of how change mechanisms work in psychotherapy.

This study highlights the significant changes that took place in the first ten sessions of a successful STDP therapy. Given the relationship between the attainment of the treatment objectives of STDP by the patient, and improvements on the presenting problems; this study offers support for the use of STDP in the treatment of anxiety, depression and low self-worth. Additionally, this study also supports the use of the ATOS as a measure that captures the patient's level of absorption of treatment techniques and its relation to improvements in patient functioning.

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