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*AFFECT-BASED TREATMENT AND OUTCOME FOR A GROUP
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ABSTRACT

Background: Affects seem to play an important role in initiating, and sustaining psychosomatic complaints. Therefore, the aim was to evaluate the effect of an affect-based treatment on perceived symptoms, self-image, and psychosocial functioning in psychosomatic patients. **Methods:** Fourteen patients with different kind of psychosomatic complaints were treated with a combination of group and individual affect-based psychological treatment. The "Affect School", included eight sessions of educative group discussions aimed at increasing the ability to perceive and express affects. The Affect School was followed by a ten individual sessions "Script Analysis", which aimed at changing dysfunctional ways of coping with affects. Before treatment depression was assessed with the Beck Depression Inventory (BDI). Before and after treatment perceived symptoms were assessed with a symptom interview and the Symptom Check List-90 (SCL-90) and the Structural Analysis of Social Behavior (SASB) was used to assess the self-image, and the Global Assessment of Functioning (GAF) to assess the psychosocial functioning. **Results:** Before treatment the patient were moderately depressed and the most common symptoms were musculoskeletal pain, fatigue, dizziness, and eye complaints. Compared to a normal group they rated significantly higher on somatic and obsessive symptoms and global severity index, and they felt more spontaneous/free about self and were less self-controlling. After treatment the symptom intensity was significantly reduced and the psychosocial functioning improved and the patients had a less negative self-image. Effect size values showed that there was a small improvement on the SCL-90, moderate improvement on the SASB and GAF and a large improvement on somatic complaints after the affect-based treatment. There was a significant negative relation between age and effect size for obsessive symptoms. **Conclusions:** The overall results indicate that the affect-based treatment might be beneficial for this group of patients.

Keywords: Affects, Affect School, Depression, Psychosocial functioning, Psychotherapy; Script Analysis, Self-image, Symptoms

INTRODUCTION

Emotions seem to be of importance in various somatic diseases, for example, it has been reported that the capability to cope with emotions, especially hostility, aggressivity, and defensiveness are probably strong determinants of diseases in the cardiovascular system [1-5]. Furthermore, emotion-specific blood pressure responses, which differ between the major categories of emotions, have been demonstrated [6] and a causative role of repressed emotions in severe hypertension has been suggested [7]. In a study, pessimistic and anxious individuals had higher blood pressure levels and felt more negative and less positive than optimists or low anxious individuals. It was suggested that pessimism has broad physiological and psychological consequences [8].

Negative affect has been shown to be the best predictor of psychological and physical health [9] and positive emotion has been associated with expressions of competence and reports of satisfying interpersonal relationships [10]. Furthermore, individuals with suppressed emotions have reported more psychological maladjustment and psychosomatic complaints than normal individuals [11].

Taken together most studies of patients with different kind of physical complaints seem to show that there is a relation between certain psychological variables such as anxiety and neuroticism, negative emotions such as pessimism and reported physical complaints.

In discussions of treatment of patients with psychosomatic complaints alexithymia construct, coined by Sifneos [12], has had a great impact. Alexithymia includes a difficulty in identifying and describing feelings, distinguishing between feelings, and the bodily sensations of emotional arousal. Alexithymia includes also constricted imaginative processes and an externally oriented cognitive style. The alexithymic patients are usually not good candidates for traditional insight-oriented psychotherapies and require modified treatment approaches. It has been suggested that the therapeutic approach to the alexithymic patient should include treatment modalities that have the potential for increasing emotional awareness and the capacity to regulate and modulate instinctual tensions and states of emotional arousal through cognitive processes [13-18]. Modifications of psychotherapy for alexithymic patients should focus on enhancing the patients' awareness of deficits in the way they process and experience emotions. The modified psychotherapy shall develop affect tolerance by education and help to recognize, differentiate, label, and manage their own feelings [19]. Methods which direct patients' attention to behavioral expressions of emotion can provide an increased emotional awareness [20]. Group therapy has been suggested to be a useful adjunct to individual psychotherapy because it provides a broader range of interpersonal situations for alexithymic patients to experience and learn about emotions [21, 22].

Psychodynamic, cognitive, and behavioral oriented group therapy have been shown to be successful in the treatment of patients with somatization disorder, and various psychosomatic problems such as back and abdominal pain, and fatigue [23-25]. Positive treatment outcome on psychosomatic complaints such as irritable bowel syndrome, chronic fatigue syndrome, and multiple chemical sensitivity syndrome have been reported in studies using cognitive and psychodynamic oriented short-term individual psychotherapy [26-29].

The affects seem to play an important role in initiating, and sustaining psychosomatic complaints and both group and individual therapy methods have been reported to be effective in the treatment of these complaints. Therefore, the aim of this study was to evaluate the effect of an affect-based treatment model, which included both an educational group therapy and individual psychotherapy, on perceived symptoms, personality, and psychosocial functioning in patients with psychosomatic complaints.

METHODS

Subjects

Fourteen patients with psychosomatic complaints were referred from various medical professionals and the Social Insurance Office to the Department of Applied Psychology, Umeå University for psychological investigation and treatment. Seven were women with a mean age of 51.9 yr. (range 38-69 yr.) and 7 were men with a mean age of 43.7 yr. (range 34-54 yr.). When included in the study, 11 patients were on 100% sick leave, 2 worked, and one had retirement pension. All patients had tried various kinds of treatment without a positive effect before they were referred to our Department. All participants gave their informed consent and the study was approved by the Ethics Committee for Human Experiments at Umeå University.

Affect-based treatment methods

The treatment model in the present study included two treatment methods. The first method was the *Affect School*, which is an educational group therapy, and the other was the *Script Analysis*, which is an individual treatment method. Both the Affect school and Script analysis are based on Silvan S. Tomkins affect theory [30-33]. Tomkins looked upon affects as analogue amplifiers that create experiences of urgency. He also argued that affects are comprised of correlated sets of responses involving the muscles especially the facial muscles, the respiratory system, and the autonomic nervous system. In Tomkins' opinion, these correlated responses are the affect and as an analogue amplifier, each affect create a distinctive qualitative experience about intrapsychic events and events in the environment. The characterization of affect as an urgent, general, and abstract amplifier is important in understanding the affect system and its motivational power. Silvan Tomkins affect theory includes eight specific primary affects: anger, disgust, distress, fear, interest, joy, shame and startle. Tomkins also presented the script theory, which described the script as a recurrent problem of perception of an event and the affects and behavior that accompanied it. The scripts bring order to our experience by linking together sequences of affects and behavior that characterize significant and recurrent interactions.

The Affect School (AS) is an eight-session educational group treatment including a two-hour weekly session. The overall goal of the AS is to increase the affect awareness, and to increase the ability to perceive and express affects. Each session begins with a 30-minute didactic presentation of topics related to affects such as the importance of the affect system, the compass of affects, and the mechanism of affective scripts. Furthermore, in each session one or two specific affects are presented and the specific affect's role and importance is underlined and discussed. In the next step of the session, the participants are asked to think of and tell about a specific situation when they felt the actual affect, they

also have to describe how this affect is experienced, how they express it verbally and non-verbally, and how they can identify other persons expression of the specific affect.

After the AS, the patients attended an individual ten-session Script Analysis (SA) including 45-minute weekly sessions. In the SA, the individual dysfunctional affective scripts are identified, explored, and analyzed in order to increase the awareness of the importance of these scripts in intra- and interpersonal processes. The SA focuses on interpersonal episodes where the dysfunctional scripts appear. Alternative affects, attitudes, and behavioral pattern are discussed and trained. Each session ends with a suggestion for homework, which focuses on specific interpersonal episodes.

Assessments

All patients were interviewed according to a registration form especially designed for this purpose. The interview included a registration of the patients' symptoms and the symptom intensity was measured with the use of a 10 cm Visual Analogue Scale (VAS), graded 0-10 on the back of the scale.

The patients rated their symptoms with the Symptom Check List-90 (SCL-90) [34, 35]. SCL-90 consists of 90 items describing different kind of symptoms and the subject is asked to indicate on a scale between 0=never and 4=often, if he/she has experienced that symptom during the last couple of weeks. The 90 symptoms are grouped together into 9 different symptom dimensions: interpersonal sensitivity, anxiety, paranoid ideation, phobic anxiety, depressive symptoms, hostility, somatic, psychotic and obsessive-compulsive symptoms and an additional scale with other symptoms such as trouble with sleeping, disturbances in appetite that do not exclusively belong to any of the other 9 dimensions. The mean of all 90 items constitute the global severity index, GSI. The SCL-90 has high internal consistency and high test-retest reliability [34].

The Swedish version of the revised 21-item Beck Depression Inventory (BDI) was administered to assess the pre-treatment intensity of depression [36]. The BDI score ranges from 0 to 63 and scores between 10-18 describe mild to moderate depression; 19-29 moderate to severe depression, and 30-63 severe depression.

As a measure of self-image the introject version of the Structural Analysis of Social Behavior (SASB) was used [37, 38]. The SASB is based on interpersonal theory where personality is defined in a dynamic way as how you treat yourself. The model consists of two basic dimensions affiliation (love-hate) and interdependence (spontaneity-control) and it has been shown that the affiliation dimension corresponds to aspects of neuroticism and extroversion in the Five Factor Model and Conscientiousness to the interdependence dimension [39]. In the SASB model the two basic dimensions are combined as 36 different points in a circumplex model and these points are formulated as statements on a questionnaire, where the subject is asked to rate on a scale between 0 and 100 describing how well the statement describes the person. In the cluster version of the model the points are summarized into 8 clusters describing how an individual treats him/herself (Figure 1).

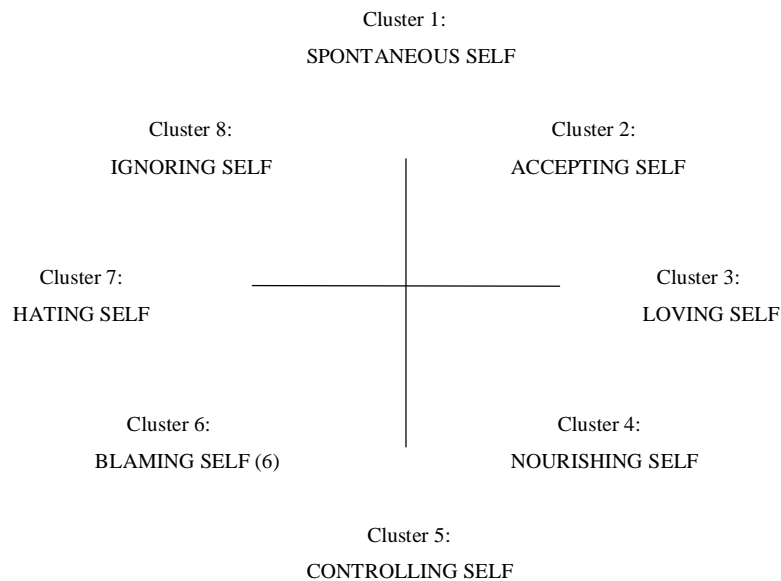


Figure 1. The 8 clusters of SASB.

SASB has high test-retest reliability and internal consistency [37]. In the present study the mean ratings of the positive clusters (accept, love and nourish self) were used as a measure of a positive self-image and the mean of the negative clusters (blame, reject and ignore self) as a measure of a negative self-image.

The Global Assessment of Functioning scale (GAF) was administered to rate the patients' level of psychological, social, and occupational functioning [40]. The GAF ratings are on a scale from 1 to 100, where 100 is optimal functioning. The assessments were made on the basis of an interview with the patient.

Comparison groups

The comparison group for the SCL-90 consisted of 51 subjects, 28 males and 17 females with a mean age of 27.8 years (range 21-42) and for the SASB consisted of 52 subjects, 24 males and 28 females with mean age of 33 years (range 20-56). All subjects in both comparison groups were either working or studying and none was at the time of the testing a psychiatric patient or had any known somatic diseases.

Procedure

The patients were interviewed about their symptoms before treatment. The interview included patients' symptom ratings with the VAS, and the SCL-90, SASB and BDI forms were completed. The interviewer rated the GAF score on the basis of the interview. In the next phase, the patients attended the AS in two-hour sessions once a week in eight weeks. After the AS, the symptoms were evaluated with the VAS, and the SCL-90 and SASB forms were filled in and GAF was rated by the interviewer. Thereafter, the patients attended the SA one hour once a week in ten weeks, and finally, the same assessments were made as after the AS. A group of about 10 researchers, that all had some training in psychotherapy, took part in the study as interviewers, group leaders and psychotherapists. All patients did not complete every measurement with the BDI, SCL-90, and SASB. The

number of completed forms are presented in the results. All figures that show change over time are based on the same number of subjects for each timepoint.

Statistical methods

Students *t*-test for independent groups was used to compare the patients with the comparison groups. One-way ANOVA with repeated measures was used to compare ratings over time. As outcome measures the effect size values (ES) were computed as the difference between before treatment and after the Script Analysis for each instrument. All ES-values were computed so that a higher ES-value meant more improvement. The ES-values were interpreted according to Rosenthal [41] where $ES > .20$ is small improvement, $ES > .50$ is a moderate improvement and $ES > .80$ is a large improvement.

RESULTS

Level of depression

Mean ratings on BDI was 15.1 (n=11) before treatment indicating that the patients were mildly to moderately depressed.

Symptom profile

In the symptom interview the most frequently reported symptoms were pain from the musculoskeletal system (n=12), fatigue (n=7), dizziness (n=6), various eye symptoms (n=6), sickness (n=5), and numbness (n=5). The mean VAS scores for all symptoms taken together were 6.2 (SD=1.76) before treatment, 5.4 (SD=2.37) after the AS, and 4.2 (SD=2.81) after the SA. The reduction of the mean VAS scores was significant ($p < 0.05$) after the AS compared to the pre-treatment score, and significant ($p < 0.01$) after the SA compared to the score after the AS (Figure 2).

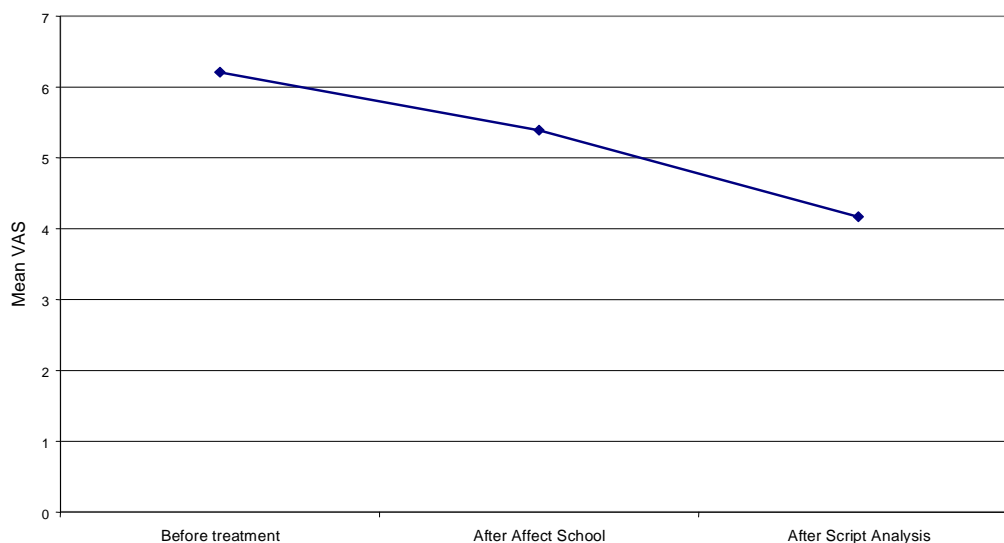


Figure 2. The mean VAS scores of somatic complaints before treatment, after the Affect School and Script Analysis.

Before treatment the patients (n=9) rated significantly more symptoms on the SCL-90 than the comparison group on two dimensions: somatic symptoms ($p<0.001$) and obsessive symptoms ($p<0.05$) and on the GSI-index ($p<0.05$). Ratings of somatic and obsessive symptoms and the GSI index are shown in Figure 3.

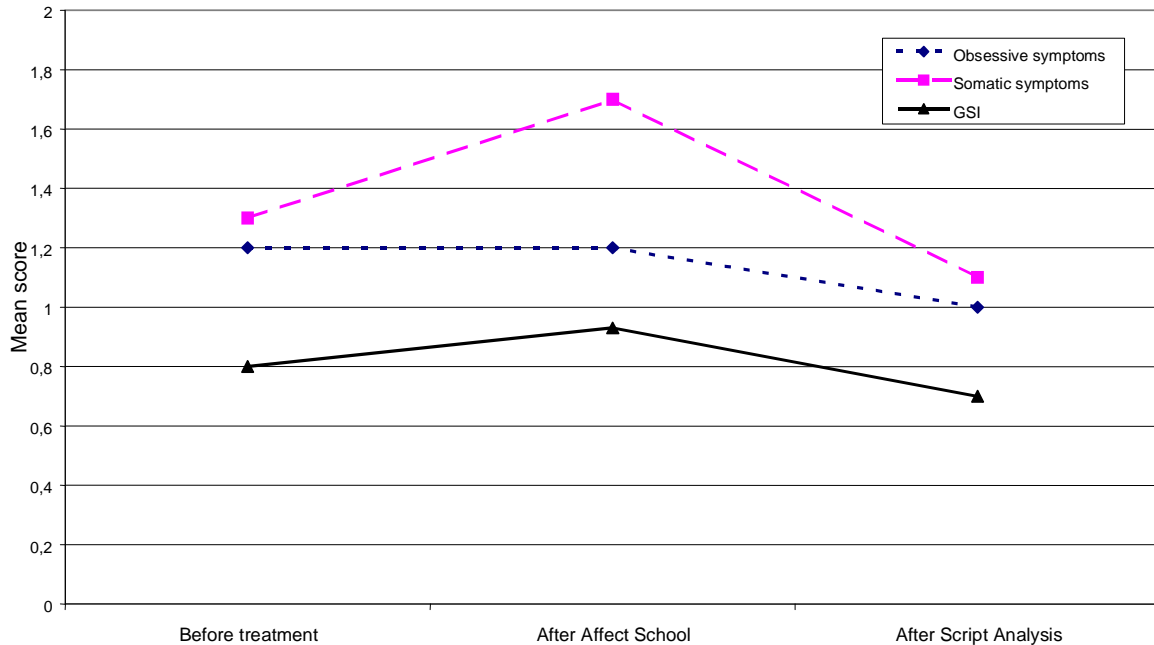


Figure 3. SCL-90: somatic and obsessive symptoms and GSI before treatment, after the Affect School and Script Analysis.

As seen in Figure 3 the symptoms increased somewhat after the Affect School especially the somatic symptoms. The slight decrease in somatic and obsessive symptoms and in the GSI index after the Script Analysis compared to before treatment was not significant.

Self-image

Before treatment the patient's self-image differed significantly on the SASB from the comparison group in two clusters. The patients (n=13) rated that they felt more spontaneous or free about self (cluster 1) ($p<0.001$) and were less controlling of themselves (cluster 5) ($p<0.001$). The ratings of the self-image are shown in Figure 4.

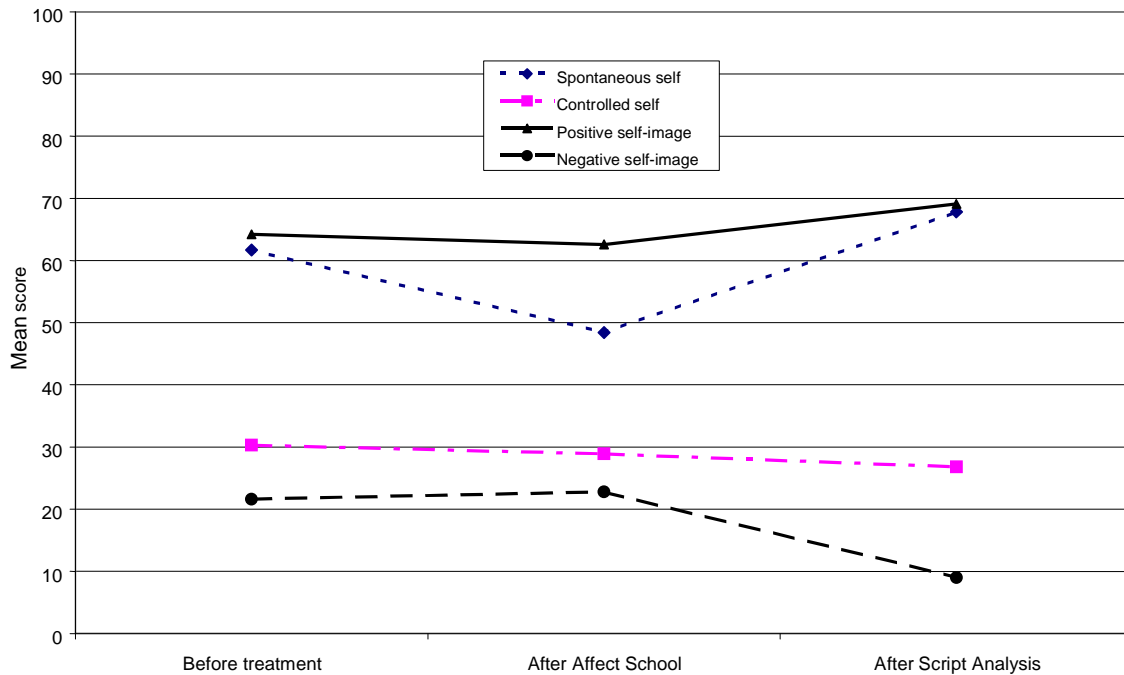


Figure 4. Self-image (SASB) before treatment, after the Affect School and Script Analysis.

After the Script Analysis the patients rated that they blamed, attacked and ignored themselves less compared to before treatment ($p < 0.05$). For a spontaneous self the trend was that after the Affect School the patients rated that they felt less free and spontaneous about self ($p < 0.05$), which then increased after the Script Analysis to the same level as before treatment.

Global Assessment of Functioning

Before treatment the mean GAF score ($n=14$) was 62.7 (SD=8.1), after the AS 65.1 (SD=7.4; $p < 0.05$), and after the SA 70.8 (SD=10.3; $p < 0.01$) (Figure 5).

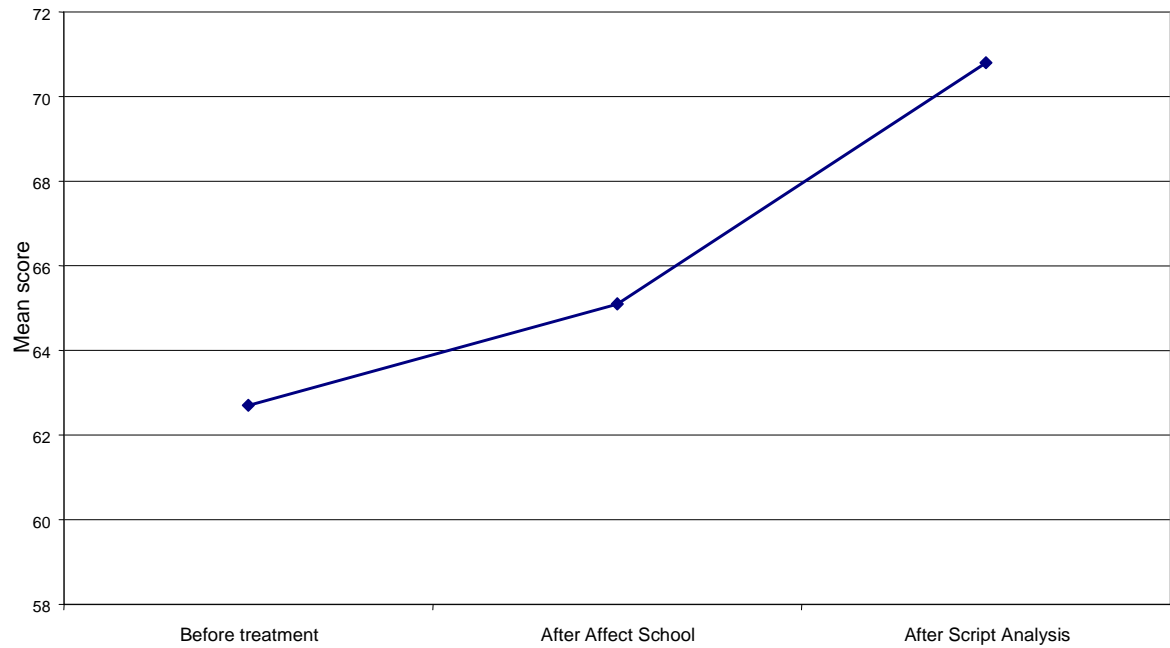


Figure 5. Mean GAF score before treatment, after the Affect School and Script Analysis.

Outcome ó ES-values

Improvement defined as the difference before treatment and after the Script Analysis in symptom intensity on the VAS, somatic and obsessive symptoms and the GSI index on SCL-90, the different aspects of the self-image (SASB), and GAF was computed as ES-values. The computation was done so that a positive value of ES means improvement. The ES-values are shown in Figure 6.

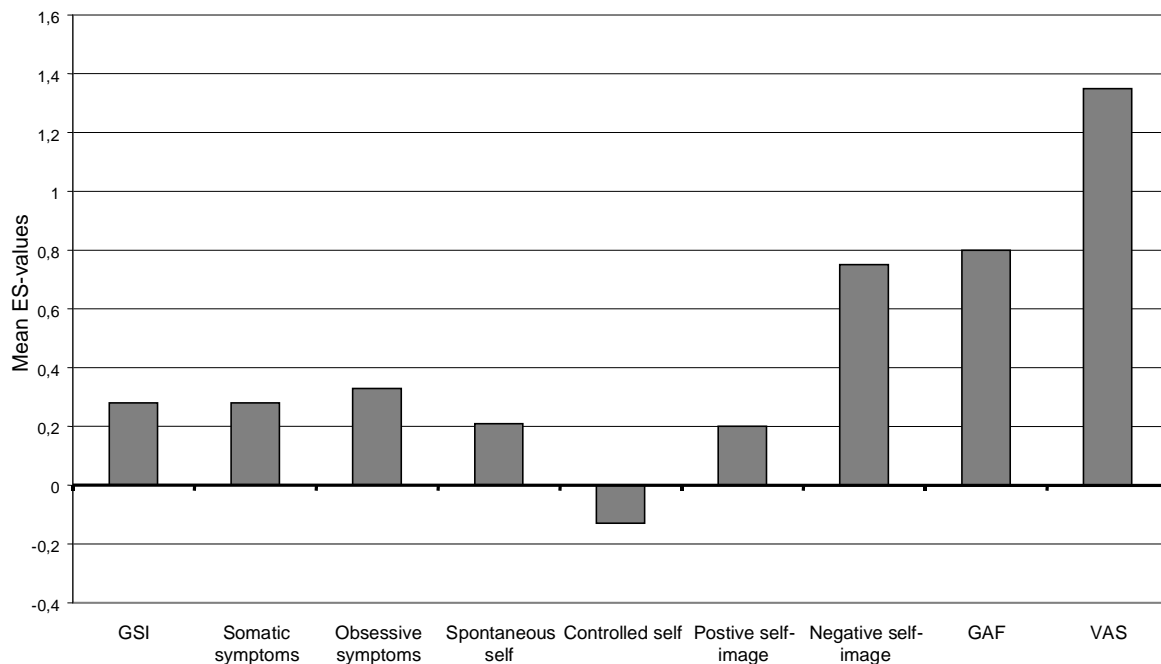


Figure 6. ES-values for the global severity index, somatic, and obsessive symptoms (SCL-90), self-image (SASB), GAF and VAS.

There was a small improvement on the GSI, somatic and obsessive symptoms. The negative self-image and GAF showed moderate to large improvements, and the VAS improved remarkable.

To summarize the main results: before treatment the patients rated themselves as moderately depressed on the BDI. They had high ratings of somatic complaints with the VAS-scale. They had more somatic and obsessive symptoms and a higher level of total symptom ratings on the SCL-90 compared to the normal group. They rated themselves as more spontaneous and less self-controlling compared to the normal group. They were judged as having an inferior functioning on the GAF. After the Affect School both the VAS and GAF improved but there seemed to be a deterioration in somatic symptoms and the patients felt less spontaneous and free about themselves. After the Script Analysis the improvement on the VAS and GAF continued and now the self-image also improved and the patients rated that they treated themselves less negatively and the deterioration in somatic symptoms and spontaneity disappeared.

Age and gender

Before treatment there was a tendency that women rated a less negative self-image and were judged higher on the GAF. There was a significant negative relation between age and ES for obsessive symptoms ($p < 0.05$), meaning that older patients improved less in obsessive symptoms.

DISCUSSION

These are the first preliminary results from a study with treatment of patients with different psychosomatic complaints that is based on affect theory. The results showed a clear reduction of somatic symptoms after treatment as well as a decrease in the negative aspects of the self-image and a better level of functioning. This means that after treatment the patients experienced a clear relief in their symptoms and treated themselves less negatively in terms of blaming and ignoring themselves and improved their general level of functioning. The results indicate that the patients might have achieved a more adaptive way to cope with their problems since generally a negative self-image is related both to all sorts of psychological problems such as anorexia [42] and personality disorder [35], and to negative psychological processes such as higher burnout in staff [43] and a more negative outcome in transsexual patients [44] and in psychotherapy [45]. The present results also agree with other studies of personality and reported physical complaints where higher neuroticism was related to more complaints [46].

The increase in symptoms on the SCL-90 and decrease in spontaneity on the SASB after the Affect School indicate that the AS starts a change process in the patient. It might be experienced threatening and difficult to focus on affects and feelings in a group together with other persons. The Script Analysis seems to have managed to turn that change process into a positive one since after the SA symptoms decreased and spontaneity increased and the positive changes that had started on the VAS and GAF increased in addition to a positive change in the negative aspects of the self-image.

The patients in the present study were in the range of 61-70 on the GAF after treatment, which describes them as having a pretty well functioning in general with some meaningful interpersonal relationship, but have some difficulty in social or occupational functioning [40]. The significant improvement on the GAF scale indicates that the affect-based treatment model including the Affect School and the Script Analysis reduces suffering and increases the psychosocial functioning.

There are a number of drawbacks in the present study. A major one is that there was no control group to compare what might happen to these kind of patients with other kind of treatments. However, all patients had been ill for several years and had received various kinds of treatment before they were referred to treatment in the present study so the results might be considered as promising. Another drawback was that all patients did not complete all rating forms. This was mainly due the large number of forms that were included in the present study some of which have been excluded as the project continues. A third drawback is the small size of the group that was followed up. However, since the project is continuing with the same instruments as in the present study it will be possible to present results for a larger group of patients as well as results from longer follow-up periods.

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