“The Efficacy of Schema Therapy on Women Suffering from Dysthymia Disorder: Reduction of Depression Severity and Early Maladaptive Schema” (A single Case Study)

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Abstract: Objectives: The present study aimed to examine the efficacy of schema therapy in treatment of women’s dysthymia disorder. Method: Six women, who suffered from dysthymia disorder, were chosen based on structured diagnostic clinical interview for Diagnostic and Statistical Manual of Mental Disorder i.e. DSM-IV (SCID). Subjects were chosen by purposive sampling and after being qualified in accordance with therapeutic conditions, they entered into treatment process. The study employed a single system multiple–baseline design. The schema therapy was given to six women over the course of 16 weekly sessions and the follow-up stage was pursued two months after the end of treatment. Beck Depression Inventory (BDI-II) and Young Schema Questionnaire Short Form (YSQ-SF) were the research tools. Optical Analysis and Cohen’s Coefficient of Effect size were used for statistical significance. Recovery percentage was also applied to measure clinical significance. Findings: The schema therapy was effective on reduction of depression symptoms and early maladaptive schemas. Conclusion: Schema therapy has appropriate efficacy in treatment of women suffering from dysthymia disorder.

Keywords: Schema Therapy, Dysthymia disorder, Beck Depression Inventory

1. Introduction
Dysthymia is a chronic temperament disorder that is relatively widespread among patients; namely, about 5-6% of all people suffer from this disorder (Kaplan & Sadok, 2003). In comparison with major depression, though the given disorder may be less prevalent, about 10% of depressed patients are under treatment after diagnosis of dysthymia (Keller & Hank, 1995) and between 25 to 40% of referent patients to psychiatric clinics express some symptoms of dysthymia (Clark, Beck & Alford, 1999) and more than 47% of those referent people to clinical centers of General Practice are ones who suffered from chronic depression disorder (Tropy & Klein, 2008; Amov & Constantino, 2003). Compared with patients who suffered from major depression, those with dysthymia disorder show weaker premonition, more personality depressing characteristics and adaption at lower level (Clark et al, 1999), greater amount of occupational and family problems, and eventually they are faced with more severe problems in their individual relationships (Klein, et al, 1998).

Dysthymia disorder is resistant against recovery (Gotlib, Schreadly, 2000; Howland, 2004) and 40% of patients do not give positive response to pharmacotherapy. Term, “resistant against recovery” refers to lack of least response (reaction) to daily 150mg dose of imipramine (antidepressant) or with identical dose of other drug (Moori & Garland, 2003). According to McCullough (2000), Moor et al (2003) and Wishman’s classification (2008), chronic depressions are categorized into following four classes:

I- Period of major depression in relative treatment;
II- major Depression Disorder without treatment between periods;
III- Dysthymia disorder;
IV- Dysthymia disorder and major depression (Double depression)

Of the foremost reasons for being resistant against treatment, one can imply different nature of dysthymia disorder in contrast with other types of depression as well as incompatibility of many prevalent recovery assumptions in cognitive-behavioral field with characteristics of chronic disorders like dysthymia (Young et al, 2003; Wishman 2008; Dobson, 2010). Unlike major depression, depressed temperament does not greatly vary in this disorder and sometimes it lasts 20-30 years or more, though the average period for expression of the given disorder is 5 years in adults (Barlow, 2001). Similarly, one can denote the wider epidemic personality disorder in patients with dysthymia (Peper et al, 1995), further maladaptive schemas among patient with dysthymia compared to
those suffered from essential depression (Klein, Taylor, Harding 1988; Riso, 2003), weaker parental interdependency (Lizarral et al, 1995), greater insecure attachment (vonag et al, 1996) and factors of early growth (Moori et al, 2003) as intermediate variables that lead to weak therapeutic outcomes. The hypotheses of prevalent cognitive-behavioral treatments such as referents’ follow-up from therapeutic instructions, sufficient motive and accessibility to cognitions and excitations through a little training in chronic traumas including dysthymia in which patients are involved with characteristics like doubt, cognitive and emotional and behavioral evasions and avoidance, may lead treatment to face some problems (Young et al, 2003).

Review of research studies comprises some interesting points to find some guesses about resistance against treatment in dysthymia disorder. In a review study, Young, Weinberger and Beck (2001) reported that cognitive-behavioral treatment in dysthymia might be accompanied by more than 20% success rate immediately after therapy, but after one year, problem of relapse is approximately 30%; and also, this method may not succeed in a considerable number of patients. McCullough (2000) refers that persons with dysthymia are faced with some problems in their relationship with treatment physician, warming-up and motivation during the given sessions, so they seek humanity experience and equal status. At the same time their physician should be persistent, flexible and reliable and follow treatment structure and process and remain active and dynamic by exposition to despair, lower self-esteem and self-efficacy and negation by patients with the disorder throughout this career (McCullough, 2000). Frank and Dereit (2007) have reported lower self-esteem, inconsistency and self-efficacy as one of the vulnerability factors in patients with dysthymia arguing that although these two characteristics may be reduced in most anxiety disorders, they are considered as disorder core in dysthymia and it may lead information and behavior processing the same as a schema therapy.

One of modern approaches toward psychotherapy, which is especially purposed for the patients suffering from chronic and resistant disorders, is schema therapy. In writings of Young (2003), who is an inventor of schema therapy, it has been emphasized on this point that in comparison with other prevalent treatments, schema therapy approach is very sympathetic and humanitarian as to instead of considering psychological disorders as unusual phenomena in schema therapy, it manifests them natural. Each person has certain comparative styles and mentalities; where these are extreme and inflexible among patients referring to a physician. Such attitude makes physicians able to confront patients with maladaptive behaviors while restoring therapeutic alliance and unity, so it prevents problems related to therapeutic link and shortage of motivation and at the same time it may remedy assumed patient stance. The recent conceptualization by Young (2007) of dysthymia disorder within schema therapy model has created new hopes for recovery of chronic depressed patients. In this model, at first one should identify patient’s problems, before relating each or a number of them to the certain comparative schemas and styles, and finally employ empirical, behavioral, cognitive, interpersonal techniques and behavioral pattern-breaking.

The relatively higher prevalence of dysthymia disorder, pending commence, chronic trend and disorder core resistance against the usual treatments which have led to serious disability and defects in life practice and quality of life in patients with dysthymia (Dobson, 2010) made it inevitable search for effective Empirically Supported Therapies (EST). In overall, results show that employing treatments in cognitive-behavioral area has not succeeded in remedy of dysthymia to a great extent (Straviniski et al 1991; Wishman 2008; Dobson, 2010) and it has been one of challenges in classic cognitive-behavior therapy, and codifying effective treatments for chronic and treatment resistant patients. The present study aims at exploration of schema therapy efficiency in women who suffer from dysthymia with respect to novelty of psychotherapy method of schema therapy by answering the following questions:

1- Does schema therapy have any effect on reducing severity (intensity) of depression in women with dysthymia?
2- Is schema therapy effective in reduction of severity of maladaptive schemas in women who suffer from dysthymia?

2. Material and Methods
The outline of the current research is a single-case design of multiple baseline type among subjects where it is implemented by simple repetition of A/B/C stages. At A-step or baseline, some of therapeutic goals (depression severity, and schemas) are measured over time in order to provide baselines to form comparison basis. Following this trend, therapeutic intervention is conducted at an experimental variable stage and this will be deleted in C-stage or follow-up. At these two steps, therapeutic goals are also measured repeatedly. Based on comparison trend for responses in each test at
baseline stages, intervention efficacy is assessed by treatment and duration of responses at follow-up stage. After treatment execution, when some changes are observed at least in three subjects, one can make sure of treatment efficacy. Single-case designs, which provide the possible trial exploration into therapeutic interventions efficiency with few subjects, is compatible with clinical intervention logic and may meet the accountability to many of raised questions in field of psychotherapies assessment (Kendal et al, 1999).

The tools applied in the present study are as follows:

1- Structured Clinical Interview for Diagnosis of Disorders (SCID). DSM-IV2: This tool was developed by First, Spitzer, Gibbon and Williams. Value of 60% has been reported as intraraters reliability coefficient for SCID (Tran & Hagga 2002, quoted from Tran & Smith, 2004). Similarly, a study done by Sharifi, Asadi, Mohammadi et al (2005) on 229 participants indicated that the acceptable diagnosis were fair or good for most of special and general diagnoses (Terminal coefficient greater than 60%). The overall acceptability was also reported well (Sum kappa value were obtained for current diagnoses and life time diagnoses as 52% and 55% respectively). Their findings reveal that acceptable reliability obtained from SCID Persian version and its favorable implementation capacity might make clinical researchers and specialists sure of its application. The Sharifi et al (2004) framework was adopted for this study.

2- Beck Depression Inventory- 9, 2nd version (BDI-II): The revised version of BDI questionnaire was employed to measure depression severity (intensity) and conformed to depression criteria in (DSM-IV). Internal consistency coefficient in this version is about 73-92% with 86% as average value, and Alpha Coefficients have been reported for patients and non-patients as 86% and 81% respectively. Similarly, Fata (2003) has reported alpha coefficient of 91%, split-half correlation coefficient 89% and retest coefficient of 94% during a week. This questionnaire contains 21 questions with each question scoring from 0 to 3 and final score ranging from 0 to 63. The cut point at 13 is the lowest level of depression (Fata, 2003).

3- Young Schema Questionnaire10- Short Form (YSQ-SF): This questionnaire is aself report tool that has been built based on the experienced observations of clinical specialists. It includes 75 articles and fifteen early unacceptable schemas (Young, 1993). Each article is graded by means of six scales (1: completely incorrect ... and 6: completely correct). High score in a certain scale may indicate more probable existence of non-correspondent schema. The validity of YSQ- SF scale by Cronbach Alpha for total test and for sub scales have been reported 96% and greater than 80% respectively. Also, a study on 370 students done by Sadoughi (2008) indicated that validity of YSQ- SF scale by Cronbach Alpha for all sub scales was in range of 62-90. Furthermore, according to a research conducted by Sadoughi (2008), the accuracy rate was 87% in subjects’ classification and this shows the diagnostic reliability of this questionnaire.

Sample and Sampling Method:
The statistical population in the present study is the women with dysthymia disorder in Tehran. The given population comprises of women that refer to three psychology clinics in Tehran city. Among the population in present study, 6 cases were selected by using purposive method of sampling and based on the arrival criteria until completion of sampling. The arrival criteria include: The existing dysthymia disorder based on structured clinical interview (SCID) done by psychiatrist; lack of any other distinct disorder in axis-I; lack of sever personality disorder according to Millon Questionnaire; Lack of physical diseases relating to depression symptoms; lack background of drug abuse or dependency at present or past time; Non-taking antidepressant or psychotherapeutic drugs during 6 months before treatment; and finally to have an age between 25 to 45 and an educational degree at least high school graduation.

First, the patients were interviewed for diagnosis by a psychiatrist according to reference arrival criteria for dysthymia disorder and entered in the study if they met those criteria. At the end, 6 out of 10 subjects were chosen until completion of the control group. The research participants were entered at three stages of baseline randomly and pair-to-pair within one week interval of each other. All questionnaires were completed at baseline stage and this trend continued until formation of three baselines. Accordingly, initially the first two participants passed through first baseline and then they moved through the second phase of baseline after a week. Afterwards the second two subjects were entered into the first stage so that when the first two subjects were passing the third baseline, the second two participants were being assessed at the second stage while the third two were entering the first stage. After completion of three baselines, subjects went through the intervention stage (i.e. schema therapy) which lasted 16 sessions on a weekly basis (once a week). At the treatment stage, Beck Depression Inventory was
employed at each session and other questionnaires were filled out quarterly (once every 4 weeks). By completion of the treatment stage, subjects were followed up by all questionnaires with one month interval in 2 stages. The research started by taking written compliance letter from participants and the privacy of the given information was retained by observing ethics of research while participants had free will to leave treatment and baseline assessment. Follow-up sessions were free of charges and treatment sessions were held by discount.

In order to analyze study data, diagram optical analysis that is the first and more effective method was applied. To examine statistical significance of effect size (Cohen’s Coefficient, d) and clinical significance, the recovery percentage (mean reduction percentage) and diagnostic recovery (that is reaching under cut off point) were used. Recovery percentage, and relative recovery and effect size were significant about 50%, and 8% respectively.

Recovery Percentage= \frac{\text{Mean Baseline} - \text{Post-Treatment Mean}}{\text{Mean Baseline}}

Cohen’s d= \frac{M1 – M2}{\sigma_{\text{pooled}}}

Where \( \sigma_{\text{pooled}}= \sqrt{\frac{\sigma^2_1 + \sigma^2_2}{2}} \)

Table-1: Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Subject’s Characteristic</th>
<th>Age</th>
<th>Education</th>
<th>Disease Period (Year)</th>
<th>Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>31</td>
<td>MSc.</td>
<td>8</td>
<td>Single</td>
</tr>
<tr>
<td>Second</td>
<td>37</td>
<td>AA</td>
<td>15</td>
<td>Married</td>
</tr>
<tr>
<td>Third</td>
<td>24</td>
<td>Veterinary Student</td>
<td>7</td>
<td>Single</td>
</tr>
<tr>
<td>Fourth</td>
<td>29</td>
<td>BSc.</td>
<td>9</td>
<td>Single</td>
</tr>
<tr>
<td>Fifth</td>
<td>27</td>
<td>BSc.</td>
<td>11</td>
<td>Single</td>
</tr>
<tr>
<td>Sixth</td>
<td>36</td>
<td>BSc.</td>
<td>18</td>
<td>Married</td>
</tr>
</tbody>
</table>

3. Results

Table-2: Results of repetitive measurement of research questionnaire

<table>
<thead>
<tr>
<th>S</th>
<th>Follow-up Recovery Percentage</th>
<th>Treatment Recovery Percentage</th>
<th>Cohen’s Coefficient, d</th>
<th>Follow-up Mean (Standard deviation)</th>
<th>Treatment Mean (Standard deviation)</th>
<th>Treatment Mean (Standard dev)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>66%</td>
<td>65%</td>
<td>1.90</td>
<td>10.55 (5.50)</td>
<td>21.57 (7.08)</td>
<td>31(5)</td>
</tr>
<tr>
<td>2</td>
<td>63%</td>
<td>67%</td>
<td>2.15</td>
<td>11.55 (5.50)</td>
<td>21.57 (7.08)</td>
<td>30(6)</td>
</tr>
<tr>
<td>3</td>
<td>57%</td>
<td>59%</td>
<td>2.33</td>
<td>11.55 (5.50)</td>
<td>5.11 (10.19)</td>
<td>26(7)</td>
</tr>
<tr>
<td>4</td>
<td>61%</td>
<td>58%</td>
<td>1.40</td>
<td>11(0)</td>
<td>5.86 (21.49)</td>
<td>20(3)</td>
</tr>
<tr>
<td>5</td>
<td>52%</td>
<td>55%</td>
<td>2.10</td>
<td>15(0)</td>
<td>5.30 (22.25)</td>
<td>31(0)</td>
</tr>
<tr>
<td>6</td>
<td>58%</td>
<td>54%</td>
<td>2.51</td>
<td>13(0)</td>
<td>4.78 (22.13)</td>
<td>30(7)</td>
</tr>
<tr>
<td>7</td>
<td>59%</td>
<td>60%</td>
<td>2.13</td>
<td>12.08</td>
<td>21.08</td>
<td>29(7)</td>
</tr>
<tr>
<td>8</td>
<td>64%</td>
<td>49%</td>
<td>3.29</td>
<td>10</td>
<td>18.25 (4.02)</td>
<td>27(7)</td>
</tr>
<tr>
<td>9</td>
<td>73%</td>
<td>66%</td>
<td>2.66</td>
<td>8</td>
<td>7.22 (17.55)</td>
<td>29(3)</td>
</tr>
<tr>
<td>10</td>
<td>65%</td>
<td>59%</td>
<td>2.57</td>
<td>9.5</td>
<td>18.41 (6.59)</td>
<td>27(0)</td>
</tr>
<tr>
<td>11</td>
<td>61%</td>
<td>59%</td>
<td>2.92</td>
<td>11.5</td>
<td>5.22 (10.50)</td>
<td>28(3)</td>
</tr>
<tr>
<td>12</td>
<td>69%</td>
<td>57%</td>
<td>2.17</td>
<td>8</td>
<td>4.87 (18.05)</td>
<td>25(7)</td>
</tr>
<tr>
<td>13</td>
<td>62%</td>
<td>60%</td>
<td>2.18</td>
<td>10.5</td>
<td>19.56 (5.61)</td>
<td>27(7)</td>
</tr>
</tbody>
</table>

Participants’ demographic characteristics are provided in Table-1. Recovery percentage and effect size per participant in each Beck Depression Inventory and Young’s schema are illustrated in Table-2. As depicted in Diagram 1, scores of the second participant in Beck Depression Inventory (BDI-II) show an increase to 67% at last session of treatment with sharp decline in the severity of its depression Exploring scores in other participants, however, shows a rise in their depression symptoms (65%, 59%, 58%, 55% and 54% for the first, third, fourth, fifth, and sixth participants respectively). Yet, participants number five and six received score 14 in terms of clinical significance which did not reach under Cut off point (13) and remained at low level of depression. The data in Table-2, however, indicates that all six participants had good effect size of treatment (from 1.60 to 2.33). At the same time, BDI-II results during two months follow-up show that recovery was improved more in the first, second and sixth participant, while recovery trend of the number six was greater than other subjects.

Results of other variable, YSQ-SF, indicate that all participants had recovery percentage higher than 50% and with the mean value of treatment effect size of 2.56. During two months follow- up after treatment, the recovery trend (follow- up recovery mean percentage) continued to increase.
It is worth mentioning that in YSQ-SF, the schema scores in which participants had the highest mark were dealt with; as it illustrated in Table-1, and participants had the following criteria in the present schemas:

a) First subjects: Dependence/ Incompetence;
b) Second subjects: Unrelenting standards/ Hyper Criticalness;
c) Third subjects: Insufficient self-control/Self-discipline;
d) Fourth subjects: Self-sacrifice;
e) Fifth subjects: Failure
f) Sixth subjects: Unrelenting standards/ Hyper Criticalness

Scores trend of YSQ-SF and BDI-II has been shown in Diagrams 1 and 2.

4. Discussions
The main objective of the current study was to examine effectiveness of schema therapy in treatment of women with dysthymia. Maladaptive schemas and depression severity were the major goals of treatment. At these two objectives, comparison of participants’ scores reflects that schema therapy has succeeded in reduction of early maladaptive schemas and depression symptoms. Ingram, Hayes and Scott (2000) criteria were used in study of efficacy measurement of psychotherapy methods at present research. These criteria are as follows:
1- Magnitude of Change (to what extent, change occurred in treatment of major objectives)

The research results suggest that a noticeable reduction occurred in depression severity and maladaptive schema of participants. Subjects’ mean depression moved from relatively severe depression on baseline to lower depression over time and eventually under cut off point at the end of recovery and follow-up. Participants reached 60% of overall treatment which implies a good clinical recovery. They also acquired the effect size value of 2.13 which highlights the statistical significance of schema therapy in reduction of depression symptom severity. Moreover, mean rate of participants’ maladaptive schema moved from very severe value on baseline to the perfect normal level at final stage of treatment and follow-up period. Subjects acquired 59 percents overall recovery and effect size of 2.56 which these two show good clinical and statistical significance of schema therapy in reduction of maladaptive schema among patients with dysthymia. Results of observation indicate that recovery percentage has been remarkably increased in maladaptive schemas during follow-up time trend (with 66% overall recovery), signifying persistence and efficacy of schema therapy techniques in subjects’ main maladaptive schemas. Trend of change magnitude is shown in Diagrams 1 and 2. It is concluded from the above findings that schema therapy has changed the clinical and statistical depression severity and maladaptive schemas of patients who suffered from dysthymia. This shows efficacy since clinical and statistical recovery has been achieved in three patients at least. This finding corresponds to predictions by Young (2007), Wishman (2008) and Dobson (2010) about effectiveness of schema therapy in treatment of psychiatric chronic problems including dysthymia.

2- Universality of Change (how many percent did change and how many percent did not?)

The research results show that at the end of recovery, participants acquired 60% overall recovery in depression severity and this recovery reached to 59 percent at the end of follow-up stage; in other words, schema therapy might reduce about 60% of severity of depression symptoms in participants. At the end of treatment, participants reached 59% overall recovery in the field of early maladaptive schemas and this value arrived at 66% at the end of follow-up stage; meaning that schema therapy has succeeded to modify and equalize participants’ maladaptive schema.

A brief view of recovery percentages may indicate that recovery percentage among participants has been fixed or increased at the end of follow-up step. This is unlikely due to self-help nature of schema therapy, since the final goal of schema therapy is that participants should be able to satisfy their basic excitation needs by employing adaptive-comparative styles (Young et al, 2003).

3- Generality of Change

Diagrams optical analysis and tables indicate a parallel reduction in depression severity and early maladaptive schema in participants. The common complaints expressed by participants in the present study include lack of self-reliance, despair, mental business and incompetence where it is faced by more failure from other people or feeling of ejection, fatigue and depressed temper due to repetition of negative feedbacks or request for certainty, and these feelings may lead to defective cycle of increasing depression symptoms while exacerbating its chronicity. Results show that all participants reported parallel recovery in treatment objective elements at treatment and follow-up stages so this explicitly signifies change in patient’s complaint about individual, occupational and social life of participants along with an incremental recovery trend.

4- Acceptability rate (to what extent did people participate in the treatment process and complete it?)

Up to the end of recovery stage in the present study, participants continually attended in sessions so this shows the rate of treatment accessibility by patients. Probably due to this reason, one can deem schema therapy as one of those treatments which have high capacity of acceptability; of course, this may be because of flexibility property of schema therapy and its correspondence to participants’ schemas. The importance of this issue may be doubled when acceptability in a resistant disorder has been achieved by treatment of dysthymia, for example.

5- Safety (Were participants’ mental and physical health reduced due to treatment?)

The proper selection of participants based on criteria techniques of schema therapy and changes analysis in recovery trend within therapeutic goals resulted in no participants’ report of embarrassment and conflict during treatment and follow-up time. BDI-II and YSQ-SF results indicate that participants could get rid of early maladaptive schema and depression disease symptoms, but it is better to employ objective and standard tools to measure this variable.
6- Stability (how long did treatment achievements last?)

Optical analysis of diagrams indicates that almost in the middle of treatment period, recovery trend was stabilized in depression severity and early maladaptive schema and it continues during follow-up career. The results of two months follow-up signify that participants could also continue positive results from last session recovery in objective schemas and even increase them. According to the view of Dobson (2010), this may be due to self-help nature of schema therapy since the main goal is to enable participants to solve their problems themselves.

4. Conclusion

Overall, the results of the present study show that schema therapy is aptly efficient in reduction of depression symptoms and early maladaptive schema. However, given the fact that this research is the first study on this topic in Iran, the present research should be repeated in order to develop trust on it. According to Dobson (2010), repetition of study is possible by three ways: Literal repetition (re-execution of the same research by the former researcher and by using the previous method); Operational repetition (re-execution of the same research by other researchers); and Systematic repetition (repetition of the same study within proportional population by more and other scales). Last but not least, this research opens new door towards treatment of resistant (persistent) disorders such as dysthymia and examines Young’s claim about efficacy of schema therapy in treatment of dysthymia disorder.

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