The Efficiency of a Cognitive-Behavioral Program in Diminishing the Intensity of Reactions to Stressful Events and Increasing Self-Esteem and Self-Efficiency in the Adult Population

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Abstract

After the increase of requests and variations of the social life, stress becomes a major component, many times materialized by the negative influence of the emotional states experienced by a person. It has been determined that cognitive-behavioral programs have a positive effect of the participants, by returning or enforcing their self-esteem along with the self-efficiency by objective means. The purpose of this study is to evaluate the efficiency of a cognitive-behavioural program used for adults in order to diminish the reactions to stressful events and increase the self-esteem and efficiency.

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1. Introduction

Stress was introduced as a term of professional literature by the Canadian biologist called Hans Seyle (1956), who used it in his work referring to “the general adaptation syndrome” on a biological, psychological and medical level. Stress occurs when individuals confront events that they perceive as dangerous for their physical or mental safety, events called stressors while the reactions developed by the subjects are called stress responses (Iamandescu, 1993).

The Stress System located both in the central and peripheral nervous system, is generically activated whenever a threshold of any stressor is exceeded, plays a major coordinator role in the re-establishment of homeostasis by eliciting a complex behavioural and physical adaptive response (Chrousos, Gold, 1992).

Self-esteem is a component of the cognitive schema referring to self and is defined in multiple ways. Self-esteem represents a global evaluation of one’s own person (Rosenberg, 1965). Self-esteem is determined by the...
combination between the evaluation of one’s own values and ability to reach to the desired goals with the feelings resulted from the evaluation processes. Self-esteem is composed of a person’s self-assessment and a combination of his/her self-concept of characteristics and abilities (Flouri, 2006; Osborne, 1995).

In any activity we involve in, we seek to satisfy two needs that are indispensable to the self-esteem: the need to be loved (appreciated, wanted, popular) and the need to be competent (obtaining performance, being skilful and gifted). These needs request permanent satisfaction, as self-esteem represents a mobile and very important dimension of human’s personality (Myers, 1992; Rosenberg & Rosenberg, 1978).

Consideration towards self-esteem ensures the safety that one is valuable, it means having a trustful attitude towards the right to live and to be happy, the ease of expressing thoughts, desires and needs, and last but not least, the feeling that joy and content are natural rights of one’s self.

Self-efficacy beliefs that emerged with Social Learning Theory for the first time can be defined as personal judgments about how well the individual acts in dealing with possible situations (Bandura, 1997).

Social-cognitive models of health behaviour change cast self-efficacy as predictor, mediator, or moderator. As a predictor, self-efficacy is supposed to facilitate the development of behavioural intentions, the development of action plans, and the initiation of action. As a mediator, self-efficacy can help prevent relapse to unhealthy behaviour (Schwarzer, 1992).

Bandura (1997) stated that the self-efficacy beliefs have four main sources. These are direct and indirect experiences provided socially or by models, verbal persuasion, and individuals' physical and emotional situations.

Self-efficacy research strongly indicates that self-efficacy is a good predictor of successful task completion, correlates with levels of performance, and is related to self-esteem (Manstead & Van-Eekelen, 1998; Sadri & Robertson, 1993; Stajkovic & Luthans, 1998).

Cognitive-behavioural therapy is originated both in cognitive psychology, which emphasises the role of thoughts in activating affective states and behaviour, and behavioural psychology, which presents precise techniques of behavioural modification. This type of therapy is based on a learning process and concrete working with the patient, and permanently evaluates the effects that changes have on his behaviour and way of thinking (Holdevici, 2009).

Cognitive-behavioural therapy is an established, evidence based structured and time-limited psychological treatment for several health conditions in which an important role is played by stress management (Granath, Ingvartsson, von Thiele, & Lundberg, 2008). The basic objective of the professional during a CBT intervention is to help the patient to identify the link between stress and the irrational emotions that one is feeling (Linden, 2004). Cognitive change and the resulting behavioural change relate to cognitive restructuring, which states that people are directly responsible for generating dysfunctional emotions and their resultant behaviours, like stress, depression, anxiety, aspect that can be prevented by changing thought patterns (Beck, 1976).

The aim of the present study was to evaluate the effects of a cognitive behavioural training programme for adults in order to attenuate the reactions to stressful events and increase the self-esteem and efficiency.

2. Method, participants and procedure

We used an experimental design with random distribution of subjects in the control group (N=40) and the experimental group (N=40). All participants (N=80) have been tested in two phases: at the beginning of the cognitive-behavioural program and after its finalization. Descriptive statistic indexes and T-Test analysis were used for the analysis of the data. The participants are clients of therapy groups organized by the Association of Hypnotherapy and Cognitive-behavioural therapy from Bucharest and students of the Faculty of Psychology – Titu Maiorescu University. The intervention has been conducted between May 2009 and June 2012.

As demographic characteristics show, subjects were in the age range of 22-55 (Mean age=34.7, SD=11.26), the education level of 81.2% of them was university graduation, 18.8% of them were master and PhD students, 87.5% of them were living in Bucharest, 12.5% of them were living in other cities of the country. This sample
included the following professions: psychologists, doctors, medical nurses, theology graduates, philologists. All of the participants were explained the purpose of the research and procedures of therapeutic intervention. Each person was invited to give their consent to participate in this study and therapists offered guarantees of keeping the confidentiality of the data.

2.1. Measures

The Perceived Stress Scale (PSS, Cohen, Kamarck and Mermelstein, 1983) is a self-report questionnaire used for measuring the perception of stress. It is a measure of the degree to which situations in one’s life are appraised as stressful. Items of the PSS were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives (Cohen & Williamson, 1988).

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is an instrument that evaluates self-esteem; it is best used in the clinical psychiatric field and also in psychiatry and psychology research. Rosenberg has built a 10 items scale for which participants answer by choosing one of the four options: “true”, “rarely true”, “sometimes true”, and “false”. The global level of self-esteem influences life choices of the individuals and also their life styles.

The General Self Efficacy (GSES, Sherer, 1982) contains a number of three subscales that report the level of personal initiative, of the effort and persistence (Bosscher and Smite, 1988). The general internal consistency of the scale has a Cronbach alpha score of 0.69, and its subscales present the following values: initiative: 0.62, personal effort: 0.63, persistence: 0.64. The scoring is made by summing the results (12-60), and the highest level reflects the optimal self-esteem.

2.2. Cognitive – behavioural intervention

The cognitive behavioural group therapy program was formulated based on therapeutic program of Beck (1995) and Holdevici (2009) during 30 therapeutic sessions.

Each session included a work agenda of the following structure: weekly presentation of experienced events, establishing work strategies by using activities proposed by the psychotherapists and final feedback. The main used methods were based on the A-B-C model, characteristics of automatic thoughts and defining cognitive distortions, recognition of schemas and their relation with automatic thoughts, vertical arrow technique, analysis of objectivity, usefulness, parallelism and rationality of beliefs, self-reward and self-punishment process, using assertiveness to increase self-esteem, becoming conscious of one’s resources for a better self-efficacy. Also techniques of guided imagery, empowering self-ego and direct suggestions were used for a better and more balanced self-image of the participants.

Exercises containing problem solving techniques were included, as in the following example: each participant chose a problem to work with. The therapist presents the solving process, step by step, the participates pass them thoroughly, in writing: defining the problem, setting the objectives, generating alternative solutions, evaluating them, adopting the decision, verifying the decision and establishing the implementation plan.

The ones that are not content with the results will be able to expose the problem in front of the group, the other members having the possibility to offer alternative versions. The participant who proposed the theme will evaluated the versions they received from the group, passing again through the other steps until taking a decision. The last step of the resolving progress, applying the plan is given as homework.

The goal of this program is recognizing, challenging and changing the negative cognitions of those who suffer from high-evaluated stress and low-evaluated self-esteem and self-efficacy. The last sessions destined for closing the cognitive-behavioural intervention and prevention of relapse in the case of the problems participants brought in the group.
3. Results

The research showed that a high level of stress was identifying in both groups at the first application. Therefore, in the experimental group for the score of perceived stress level 26% of the investigated subjects declared a low level of the perceived stress; 55% of the subjects reported a medium level of stress; 19% was the valued of high level of perceived stress. Results are summarized in the Table 1.

Table 1. Stress, pretest-posttest results

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>Sig/p</th>
<th>N</th>
<th>M pre</th>
<th>SD pre</th>
<th>M post</th>
<th>SD post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>6.536</td>
<td>.000</td>
<td>40</td>
<td>23.18</td>
<td>8.28</td>
<td>18.36</td>
<td>7.84</td>
</tr>
<tr>
<td>Control group</td>
<td>1.474</td>
<td>.16</td>
<td>40</td>
<td>22.44</td>
<td>7.29</td>
<td>21.86</td>
<td>6.11</td>
</tr>
</tbody>
</table>

In the control group, 23% of the participants perceived a low level of stress, 57% of them perceived a medium level of stress and 20% reported a high-severe level of stress.

The t test has been applied to measure the difference between the means of the two dependent samples (repeated measures). In other words the results [t(40)=6.536; two-tailed, p<0.001, Cohen's d=.80] have shown data which confirms that the level of the stress coefficient is higher in the experimental group at the beginning of the CBT program compared to the one at the end. No significant results were found for perceived stress level in the control group.

The differential measure of t test was used to evaluate the statistical significance of the difference between the means of the two sets of scores. The obtained result have shown a [t(40)=8.316; p<0.001, Cohen's d=.65] score in the case of self-esteem. Results are summarized in the Table 2.

Table 2. Self-esteem pretest-posttest results

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>Sig/p</th>
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<th>M pre</th>
<th>SD pre</th>
<th>M post</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>8.316</td>
<td>.000</td>
<td>40</td>
<td>15.24</td>
<td>4.62</td>
<td>19.22</td>
<td>6.23</td>
</tr>
<tr>
<td>Control group</td>
<td>1.287</td>
<td>.20</td>
<td>40</td>
<td>16.39</td>
<td>4.07</td>
<td>16.76</td>
<td>4.61</td>
</tr>
</tbody>
</table>

Self-esteem mean at post-test in experimental group, which had received cognitive behavioural group therapy, in comparison with control group which had received no intervention, has increased (p<0.001). The control group showed lower levels of self-esteem from pretest to posttest.

The obtained result have shown a [t(40)=4.875; p<0.001, Cohen's d=.59] for self-efficiency. Results are summarized in the Table 3. Self-efficiency mean at posttest in experimental group, which had received cognitive behavioural group therapy, in comparison with control group which had received no intervention, has increased (p<0.001). The control group showed lower levels of self-efficiency from pretest to posttest.

Table 3. Self-efficiency pretest-posttest results

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>Sig/p</th>
<th>N</th>
<th>M pre</th>
<th>SD pre</th>
<th>M post</th>
<th>SD post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>4.875</td>
<td>.000</td>
<td>40</td>
<td>20.55</td>
<td>5.12</td>
<td>27.02</td>
<td>6.74</td>
</tr>
<tr>
<td>Control group</td>
<td>1.014</td>
<td>.48</td>
<td>40</td>
<td>19.42</td>
<td>4.48</td>
<td>20.37</td>
<td>5.21</td>
</tr>
</tbody>
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4. Discussion and conclusion

This study generates a starting point for measuring the efficiency in ameliorating the high level of stress and moderately increasing self-esteem and self-efficiency among the respondents who were included in the study.
The results for the decrease of the level of stress are in accord with those obtained in a meta-analysis which was conducted on stress management (Linden, 2004).

The results indicate that all participants from the experimental group showed significant improvement in self-esteem and self-efficacy, regardless of the type of cognitive behavioural intervention they engaged in. These results are in accord with those of Chen, Lu, Chang, Chu, Chou (2006) who found that the experimental group patients experienced greater cognitive improvements (self-esteem increase) as compared with the comparison group subjects. Cognitive behavioural therapy is an effective intervention for self-esteem and self-efficacy related problems that are evaluated with low scores (Agras, 1997; Dryden, 2003; Lim, Saulsman, & Nathan, 2005).

On the other hand, a limit of this study is the small number of participants and so the results should be interpreted with caution.

Previous studies have shown a correlation between individuals’ self-efficacy and their willingness to engage and be successful in differing areas of life functioning (Bandura, 1997). Bandura recognized individuals’ self-esteem, as well as how they attribute blame or credit, impacted their self-efficacy and engaging behaviours.

Using the cognitive-behavioural strategies, the respondents activate the behaviours that allow them to become conscious of their self-efficacy and self-esteem which will allow them to optimize their personal perspective.

References