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Psychoeducative Programme in Anger Management

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Abstract

Chronic uncontrolled anger (often characteristic of dysfunctional families) becomes toxic and produces changes both in the personality traits as well as in the biological substrate. Anger can minimize mental control over behaviour since it interrupts the function of the frontal lobes and detrimentally affects health, family, work-school, financial status, friends, law, personality and values.

On the other hand research conducted with fMRI, has shown a close relationship between anger and coronary atherosclerosis, ventricular arrhythmias, morbidity, and mortality. Two main brain targets of chronic anger with obvious changes are amygdala and hippocampus.

In this paper we present the results of an anger control psychoeducative programme, based on person centred and group centred principles. It is developed around the hypothesis that anger is an alarm signal indicating an unmet need.

Group members learn to bind anger situations with human needs. Among discussed subjects in small groups are personal anger experiences, family influences, physical relaxation methods, inner distorted beliefs, body signs and the psychobiological cycle of anger. Symbolization tools are also used.

As a measurement tool we used self administered STPI (State-Trait Personality Inventory), which includes eighty questions designed to measure transitory and dispositional anger, anxiety, curiosity and depression in a four-level Likert scale.

This is a twelve months (45 hours) programme divided into two phases (awareness and therapy) It was applied in three groups ($\Sigma n=30$, 2011-2014). Personality anger traits showed a highly significant difference between the beginning and end of this paired blind trial ($p<0.001$). Programme and results are presented and discussed.

Keywords: Anger management; Traits change; Psychoeducation; Clinical study

Introduction

"I was angry with my friend, I told my wrath, my wrath did end.

I was angry with my foe, I hid my wrath, my wrath did grow" - William Blake

Anger is energy and as Aristotle says, when controlled, it can drive the individual to overcome obstacles. However chronic uncontrolled anger (often characteristic of dysfunctional families) becomes toxic and produces changes both in the personality traits as well as in the biological substrate.

The most common of the emotions expressed as "negative" is anger and it is immediately followed by anxiety and sorrow [1-3]. Anger is the most dominant and difficult to control and entails additional "negative" emotions like disappointment, fear, anxiety, despair, awkwardness, pessimism, insecurity, jealousy, rejection and sadness [4]. Lacan defined anger not merely as a negative emotion but as a multidimensional state of denial and reactivity that hinders the flow of life [5].

Ramirez et al. defined anger as a natural subjective emotion that arises due to a real or imaginary threat and can range from a mild annoyance to intense hatred, in accordance with the activation of the autonomic nervous system [6]. Then an outburst of energy occurs and catecholamines are released that last a few minutes and prepare the person to respond [7]. However today, since we are not in danger of tiger attacks, this primitive defence mechanism protects us not to become a subject of dominance or exploitation by others. Therefore, anger sets boundaries within human relationships, and facilitates the acknowledgment of needs. Thus, it helps to turn attention inwards, towards self, to acknowledge and overcome feelings of fear, shyness or criticism etc.

Anger may last longer than other emotional states and stimulates to a high degree the sympathetic, while showing the lowest arousal of the parasympathetic nervous system. People who are seized by the intoxication of anger are lead to intense verbal stimulation [3], they show loss of the ability of objective judgment and reduced ability to process information and can minimize mental control over behaviour since it interrupts the function of the frontal lobes [8]. Angry persons often feel being infallible, and discontinue any attempt for communication. They cannot easily rationalize, perceive reality and make decisions because anger distorts the process of reasoning and masks the emotions that actually trigger it [8]. Therefore eight sectors of personal life are detrimentally affected: health, family, work/school, financial status, friends, law, personality and values.

On the other hand research conducted with fMRI, has shown a close relationship between anger, hostility and coronary atherosclerosis, ventricular arrhythmias, morbidity, and mortality [9,10] since this

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emotion is related to ischemia of myocardium and myocardial infarction. Furthermore chronic anger, weakens our body's defence system, increases stress and leads to unhealthy habits (smoking, alcoholism).

Two main brain targets of chronic anger with obvious changes are amygdala and hippocampus [8,11]. Anger and hostility are directly and predominately linked to amygdala. This brain structure consists of two almond-shaped brain structures that are part of the limbic brain system and is responsible for acknowledging and managing emotions, like anger, anxiety, and sadness. Amygdala also acknowledges threats and gives warning, before the cerebrum cortex, which is responsible for thought and judgment, becomes active. Then amygdala activates hypothalamus and the brain stem (locus coeruleus), thus giving warnings before the reactions become an object of cognitive processes [12]. Amygdala and hippocampus play a major role in stress anger and depression, which is anger toward self. Namely in these conditions amygdala shows hypereactivity, increased blood flow and volume, while hippocampus, which is responsible for recent and verbal memory gets smaller in size.

However according to Saraydarian's [13] perspective, anger is useful and its management is very important for the internal transformation and spiritual maturity of each individual. In practice, anger is an attempt to dominate others, but in essence is an attempt to dominate one's self. If, there is a venting of anger towards an external stimulus through an "impulsive outburst", then the primary energy, which can be used for the control and empowerment of the self, is lost. In the contrary, the management of anger, which requires responsibility, through a scheme of observation-containment-transformation, conserves the energy that is used as nourishment for consciousness and transforms anger from a primary force to a gem of self-control and mental independence [13].

Even though there has been an increase in the number of people with anger management issues, there are no suitable guidelines for the diagnosis and treatment of angry individuals. Actually, anger is not diagnostically classified as a mental disorder and it is usually verified via other practical parameters [14].

As far as therapeutic approaches are concerned, researchers agreed that old strategies implemented during the 60s and the 70s like the "catharsis expression" ("scream therapy"), are ineffective [15] and demonstrated that the excessive expression of anger but also its chronic suppression, can lead to physical illness [16,17] or can be very dangerous leading, sometimes to cardiovascular problems [18].

Contemporary therapies refer to the reconstruction of thoughts and beliefs as a means to reduce anger (cognitive-behavioural therapy), since excessive anger usually attracts negative thoughts. Deffenbaker and Stark [2] propose a combination of techniques, such as cognitive therapy and relaxation and observe that the anger of most participants is significantly reduced. Kassinove and Tafrate [19] recommend similar combinations. Feindler [20] proposed, for the type of anger that pertains to interpersonal relationships, the development of the ability of empathy and taking into consideration the opposing views. There are numerous papers on anger management groups that have been active for the last 30 years most of them are based mainly on the work of Novaco [21] on CBT (Cognitive Behavioural Therapy) with some variations and improvements by contemporary therapists.

We have not encountered, however, papers relating to psychoeducation groups in the field of humanistic psychotherapy. Therefore it is of particular interest the results of such a programme to be explored, given the fact that it is already active for the last 8 years in Greece and has no precedence.

Humanistic psychology places the emphasis on the psychological conditions that are suitable and necessary for the development of the person and successful interpersonal relationships; this point of emphasis was combined with the research movement and the use of groups [22]. Rogers' approach in relation to human relationships and groups influenced many countries lead to a movement of reform. It changed the schools' teaching methods and the training of adults "There is strong evidence that training groups with intensive group experiences have therapeutic results…Changes take place in regard to sensitivity, ability to control emotions, immediacy of motive, position towards the self, ways of behaving towards others and interdependence". Finally, he writes "In order for training experiences to be perfectly effective... they need to focus on a series of successive sessions" [22]. In a person-centred psychoeducation group, where all of Rogers' conditions are met, the appropriate atmosphere develops that allows people to make beneficial changes in order to learn [23,24].

In the present paper we present the results of an anger control psychoeducative programme, based on person centered and group centered principles (Figure 1).

Participants and Methods

Participants (Σn=30) are coming from the northern suburbs of Athens, they usually have higher or middle education and belong to middle social class. These workshops are organised in collaboration with the municipal communities. When entering in an anger group the members have, in their vaste majority, participated in psychotherapy groups, as well as groups for parental skills, communication skills, boundaries and self-esteem development. Participants' age ranges from 36 to 55 years old and in their wide majority (87%) are female. They have registered to follow the anger management programme.

The programme lasts 45 hours and it is accomplished in 20 sessions.

It is divided into two phases, phase 1: Awareness and phase 2: Therapy.

Subjects discussed in phase 1

Excessive and expressed anger wounds or destroys relationships. Participants training involve approach to different anger situations and acknowledgement of frequency of anger episodes. Structure of the anger mechanisms in the central nervous system. Aspects of anger,

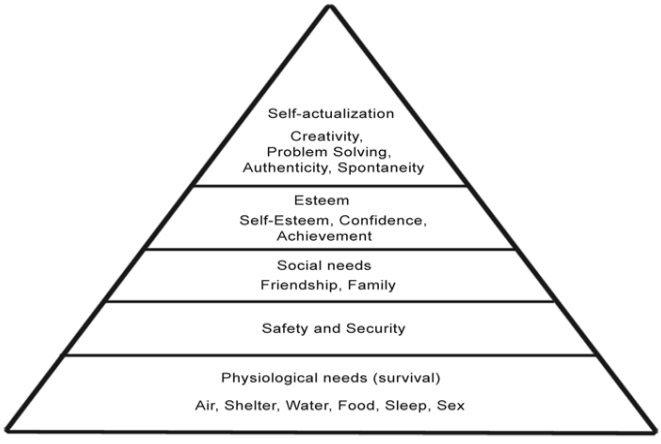

Figure 1: The programme is developed around the hypothesis that anger is an alarm signal indicating an unmet need. Group members learn to bind anger situations with human needs [4,27].

rage, aggressiveness, hostility, resentment, aversive verbalisations. Link of anger with stress and underlying, deeper feelings. Causal relationship with clinical (psychiatric) syndromes and illnesses. Guilt and Anger. Human needs, nuclear beliefs, high expectations and their relationship with anger and stress [25]. Stages of change according to Prochaska and di Clemente. narcissism and anger. Role of anger and frustration in childhood, assertivenessa and critic in childhood, creation of guilts. Therapeutic approaches.

Subjects discussed in phase 2

Deep breathing and progressive relaxation as a first aid tool. The tree of values, relationship with parents and familial environment. Body signs in anger situations. The psychobiological cycle of anger. Progressive anger and stressful situations. Allostasis and allostatic load. Forgiveness and discrimination from other concepts. Inner distortions as defence mechanisms and anger sources. Types of distorted beliefs List for replacements of distortions. Conflict situations.

Audiovisual material is widely used, personal anger experiences, family influences are discussed in small groups of five or six members. Statements lists and Symbolization tools are also used. Participants choose from an activity list which activities they prefer to perform in every session. Group centred process is encouraged during exercises.

As a measurement tool we used self-administered STPI (State-Trait Personality Inventory) [26], which includes eighty questions designed to measure transitory and dispositional anger, anxiety, curiosity and depression in a four-level Likert scale (Table 1).

This is a non randomized paired controlled blind study. The group members were handed out the STPI questionnaire at the beginning of the first phase (awareness and acknowledgement) and at the end of the second phase (therapy). Every time the STPI questionnaires were collected, they were given key numbers, they were photocopied and matched. Before being transferred for statistical processing, names were erased from photocopies. This process ensured the blind procedure. Originals were stored in a safe place.

Results

Personality anger traits showed a highly significant difference between the beginning and end of this paired blind trial (t=3.63, n=30, p<0.001, Cohen's d= 0.707). The overall difference between the beginning score and the end score of the two phase programme was of 0.36 (starting mean score 2.65 ± 0,55, ending mean score 2.29 ± 0.47) (Table 2). The z_{skew} was equal to 2.103.

After each group was separately calculated through t-tests for small samples (since the distribution of differences according to the z_{skew} test is approaching to normal) we had the following results: The group of June 2011 showed a score difference of 0.2 (starting mean score 2.32 ± 51, ending mean score 2.12 ± 0.46) which was non-significant (t=1.46, n=9, N.S.). The group of June 2012 showed a score difference of 0.66 (starting mean score 2,76, ending mean score 2,1) which was significant (t=3,1, n=10, p<0.015). Finally the group of June 2013 showed a score difference of 0.25 (starting mean score 2.84, ending mean score 2.59) which was also significant (t=2.54, n=11, p<0.04). On the other hand non parametric Wilcoxon test gave the following results: The changes for 2011 and 2013 were statistically non-significant while the changes for 2012 were significant at p=0.015.

Year	n
2011	9
2012	10
2013	11
Σn	30

Table 1: The inventory was administered in 3 groups that started consecutively during the month of June in 2011, 2012 and 2013 (Σn=30).

Year	Starting	Ending	t	Significance
2011	2.32±0,51	2.12±0,46	1.46	N.S
2012	2.73±0,53	2.10±0,33	3.1	P<0.015
2013	2.84±0,53	2.59±0,47	2.54	P<0.04
Overall	2.65±0,55	2.29±0,47	3.63	P<0.001

Table 2: Overall mean difference after Psychoeducation programme.

Discussion

Participants who come in our anger management groups, state that others make them angry and seek help in order to be relieved. During the programme their perception about this "frustrating" emotion changes. By looking into what makes them angry, they accept responsibility for their anger and they explore and acknowledge the feelings that lie beneath their anger. They find the words to express these emotions and improve their interpersonal relationships. The entire process occurs within the context of training with a group-centred approach where unconditional positive regard, empathy and congruence promote a climate of change. Furthermore, it is important to mention that this programme provides an extensive knowledge of distorted beliefs eg. Misattributions, blaming, interpretations, labelling, catastrophizing, minimizing etc. since they provoque very often important anger reactions including disfunctional behaviours. According to Rogers's theory of personality, distortions are considered as defence mechanisms [27].

An important number of papers and metanalyses in anger management is published. Models applied are psychodynamic, relaxation-based, skills-based, stress inoculation, and multicomponent, but the large majority of these studies applied a cognitive – behavioural therapy programme [28-31]. Results show variability that may be explained by the number of treatment sessions, the therapeutic model, the origin of participants and their anger level at the beginning. The findings from two meta-analytic reviews with more than 100 papers focusing on anger control problems and aggression [32,33] suggested that CBT produced medium effect sizes as compared to other psychosocial treatments and control conditions.

Both metanalyses stated that CBT is moderately effective at reducing anger problems while this type of therapy may be most effective for patients with issues regarding anger expression. Notably, Del Vecchio and O'Leary included in their metanalysis 23 studies in which subjects met clinically significant levels of anger on standardized anger measurements prior to treatment. So CBT therapy seems to be very useful for behaviour changes, especially in persons with high levels of anger.

Our orientation as well as our samples and methods are different. Our goal is to create the climate in order to help and support personality changes which need more time than behaviour changes. In our study the groups are small and consist of nine to eleven members, with medium to low anger levels at starting point. Our results show that a highly significant decrease of the trait anger score (p<0.001, n=30) is happening after finishing the two cycles of our programme (Figure 2). This decrease of the anger score in personality characteristics tends to be repeated in every year's group. . Namely calculus through Student's t-test for small samples - which can be considered as valid since the z_{skew}

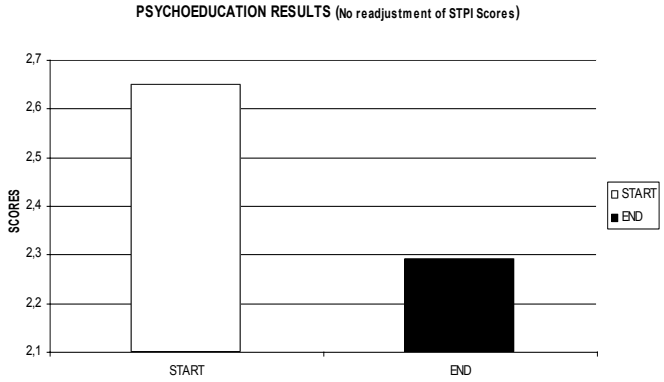

Figure 2: Psychoeducation results.

test value (2.103) shows a close approximation to normal distribution – results in statistical significance in two (2012 and 2013) out of three groups taking part in the present study. Furthermore the result of the effect size, which is calculated through Cohen's d (=0.707), seems to be converging to this assumption, since it shows a quite "strong" change.

There is another point to comment in our results. The STPI instrument rates the negative answer to the statement or the rare existence of a specific trait with "1". For instance a negative answer to the statement "I want to kick somebody" would be be rated with "1". Therefore, one could try to make readjustment through substraction in order to have a better sense of change between these two points of measurement, the beginning and the end of the sessions. Thus by making an adjustment of -1 to all the scores, one can realize, for instance, that the group of 2012 had a score reduction of 37,5 %, while the other two groups 2011 and 2013 had a minor by still important change in their personality anger related characteristics. The overall change was of 21.8% score reduction as far as anger is concerned and it could be considered as important personality change within a time period of eleven or twelve months (Figure 3a).

However one more question needs to be answered. Did members with higher rates of anger show a change in their traits after the psychoeducative intervention? In order to answer this question we calculated the mean rate of change in 9 subjects, which had a starting

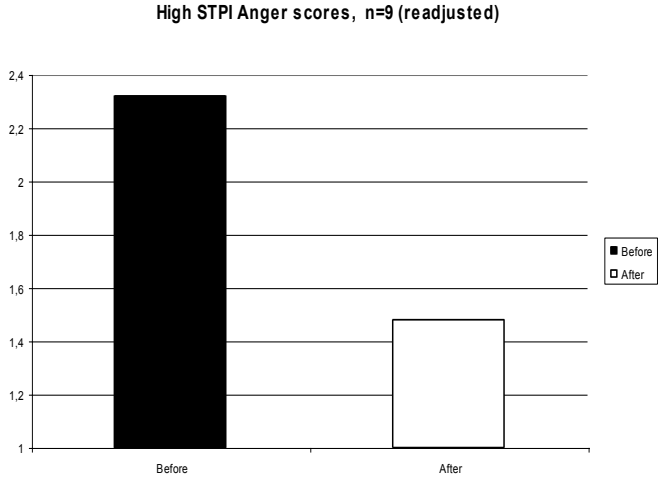

Figure 3a: High STPI anger scores.

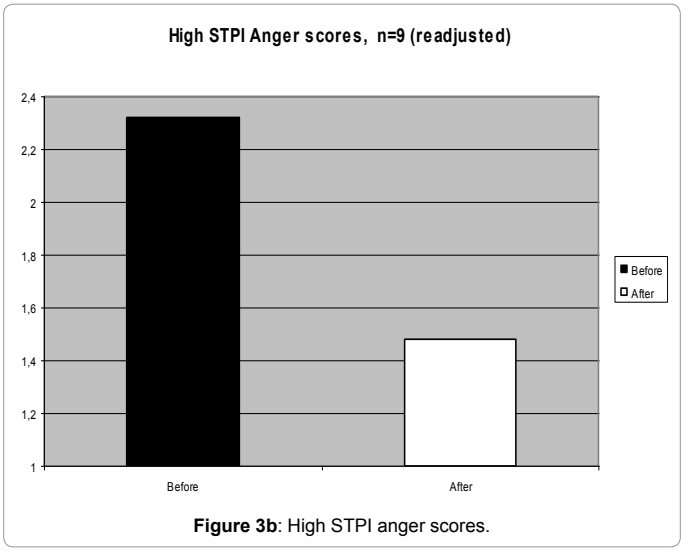

Figure 3b: High STPI anger scores.

score => 3, i.e. one person from the 2011 group, four persons from 2012 and four from 2013. Here, the mean positive change on personality anger traits (after readjustment of results with -1) was as high as 36.6% within eleven or twelve months (Figure 3b).

As far as the factors affecting the validity are concerned, clinical studies without randomization do not prove a causal relationship i.e. a direct relationship between the nature of the applied therapy and the result which is achieved. Therefore a future randomized blind study with a control group would be important. A further element concerning the potential efficacy of our intervention is the psychological and cultural level of the group members. The big majority of them have already a previous experience of group centred procedure, since they have participated in parental skills or personal development groups. In addition, they have usually attended higher education programmes, meaning that they are college or university graduates. However, in our study a repeatable result of anger traits reduction is achieved, thus meaning that there are important indications about the effectiveness of our intervention. At this point, it should be noted that within the last fifteen years, there was only a small number of longitudinal studies with anger traits change in Medline, probably due to some design difficulties [34-36]. More specifically, it would be hard to show significant results with a small number of participants. Nevertheless the effect size of our study (0.707) is higher that the mean effect size (0.64) calculated in the metanalytic review of Saini [33] representing 65 studies with trait anger changes. This size shows a considerable change in personality traits with small groups, which is repeatedly observed through the three years of the study, irrespectively of the starting level of anger traits score.

This is a preliminary paper. The scientific evaluation continues in order to examine further details and changes while increasing the number of participants by adding the results of anger groups and of the distinct programme phases for the years to follow after 2013. Also a 3rd cycle concerning assertiveness training and deeper knowledge of self will be evaluated.

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