

A COGNITIVE-BEHAVIORAL INTERVENTION DELIVERED IN DOG PHOBIA: A SINGLE-SUBJECT EXPERIMENT

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Abstract

This paper presents a case study carried out as part of a therapeutic intervention for specific phobia. From the multitude of possible phobic stimuli, the article presents the phobia of dogs, because there are many people who are afraid of these animals, especially of possible encounters with stray dogs, in everyday life.

There have also been cases of serious incidents, which actually strengthened the fear of these people, that they could be injured as a result of such unintentional contacts. On the other hand, there is also the category of animal lovers, for whom the possibility that a dog could hurt a human cannot even arise, a dog would only approach a person looking for food and comfort.

The objective of this article was to present a practical way of therapeutic intervention of cognitive-behavioral origin, in dog phobia. From a methodological point of view, the use of the single-subject experiment was the most appropriate choice.

In this experiment, all therapeutic procedures were performed, in ascending order, according to the design of changing the criterion.

The results were encouraging, the level of symptomatology and maladaptive avoidance behaviors, generated by the fear of dogs, were substantially reduced and the level of well-being and quality of life of the person undergoing therapeutic intervention increased.

Keywords: cognitive-behavioral intervention, specific phobia, dog phobia.

1. INTRODUCTION

Today in Romania, psychotherapy is becoming an increasingly important element in the therapeutic strategy adopted in the field of mental disorders. The dispute between psychotherapy and chemotherapy has already been overcome, the only issue under discussion is about achieving the best combination between these two therapeutic approaches, depending on the patient and his problems. The

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doctors came to the conclusion that the tablets, although very useful, do not give answers to the dramatic questions that the patients ask themselves and the psychologists also understood that there are situations in which psychotherapy has its limits and the medical treatment must also be applied (Gelder *et al.*, 1994).

Cognitive-behavioral psychotherapy is today considered one of the most advanced existing psychotherapeutic treatment, used both in health promotion and in the treatment of mental disorders or somatic disorders, which involve psychological mechanisms in their occurrence (Beck, 1976; Beck, 2010).

This paper will highlight, through the experiment with a single subject, the effects of the application of cognitive-behavioral psychotherapy techniques on the mental state of a person with a specific phobia.

Evolutionary psychology analyses (Ellis, 1994) show that irrational evaluations are the result of an adaptive process. For years, the human species have adapted to the environment and to a series of relatively simple and well-defined tasks: to find food, to have shelter and to procreate. In this environment, an irrational style was adaptive: the tasks being simple, a hyper-motivation in terms of „should” does not affect performance; a catastrophic thinking style protected people to the extent that they were always alert and ready to react to danger, whether it was real or not; low frustration tolerance helps people to change the situation, for example a man could kill the dominant male to take his place; and the global assessment allowed the quick categorization of the surrounding beings and things into useful or useless.

In today's modern and hyper-complex environment, tasks are much more complicated. What was useful in a simple and well-defined environment becomes vulnerability to disease in a complex environment. A hyper-motivation in complex tasks leads to a decrease in performance. An anticipation of danger in highly structured social situations, for example in front of the class in the lecture hall, can lead to performance anxiety. A low tolerance for frustration, which is expressed in acts of violence, is drastically punished by society. Global evaluation, manifested by contempt for others and for oneself, affects the individual in his social relationships (David & Szentagotai, 2006).

The consequences of information processing can be adaptive or maladaptive. They are manifested at three levels: behavioral, physiological and affective; and the interactions of these levels, together with the related information processing, generate specific mental disorders (Sarason & Sarason, 1999).

At the behavioral level, we also distinguish between adaptive and maladaptive behaviors (David, 2006). Adaptive behaviors are those observable and measurable reactions, learned during ontogenetic development, which are useful to the person and help him to adapt effectively to his environment; and the maladaptive behaviors are, as it is logical, the exact opposite, those behaviors that are detrimental to the person and that prevent them from adapting effectively to their environment.

At the physiological level, the consequences of information processing are mainly in the sense of producing an imbalance of the vegetative nervous system. For example, in the case of anxiety disorders, physiological activation increases, leading to changes in the electrical conductance of the skin, to an increase in heart rate, breathing rate and blood pressure. In the case of depression, the opposite phenomenon occurs: physiological under-activation (Kendall, 1998; Comer, 2001). At the affective level, a clear distinction is made between functional and dysfunctional emotional experiences (positive and negative). The functionality of emotions is given by the subjective experience, the associated cognitions (rational or irrational) and the behavioral consequences of these emotions (Leahy & Holland, 2010).

Cognitive-behavioral therapy uses behavior modification techniques, which incorporate procedures aimed at changing maladaptive beliefs. The therapist helps the client to control his disturbing emotional reactions by teaching him more effective ways of interpreting and thinking about events (Levy-Bennett *et al.*, 2003).

According to the theory of Albert Bandura (Bandura *et al.*, 1999) about observational learning or learning through modeling, observing other people coping with situations and succeeding, by verbally convincing ourselves that we can handle a difficult situation and evaluating that we are relaxed and in control, contributes to the feeling that we are also capable and efficient. But it contributes the most to the feeling of self-efficacy, a concept also taken from Bandura's theory (Bandura *et al.*, 2003), practicing and experiencing the feeling of skillful and successful. Nothing can help the treatment more than a successful step and the therapist can demonstrate this to the client through a successful behavioral experiment.

Cognitive-behavioral psychotherapy not only helps people overcome problematic thoughts, feelings and behaviors, but it is most likely to prevent symptoms from returning after therapy ends. In a study by Clark *et al.* (1994) it is shown that the percentage of patients who suffered from panic attacks and did not relapse the symptoms, after 15 months from the end of the therapy, was: 40% in the case of using some relaxation techniques; 50% in the case of drug treatment with imipramine and 80% in the case of using cognitive-behavioral therapy techniques. These techniques for changing cognitions and behaviors form the basic strategy of cognitive-behavioral psychotherapy. Thus, the tools available to the therapist are: hypothesis testing, staging experiments, inductive questions and weighing advantages and disadvantages (Leahy & Holland, 2010).

From this point of view, in cognitive-behavioral psychotherapy the functions of well-formulated and well-addressed questions are very clear, as they are presented in the Cognitive Therapy Scale (Vallis *et al.*, 1986):

- to encourage the patient to start the decision-making process, by developing appropriate alternatives;

- to help the patient in making a decision, by weighing the arguments for and against, which have already been generated;
- to warn the patient to consider the consequences of continuing to engage in dysfunctional behaviors;
- to examine the potential advantages of adaptive behaviors;
- to determine the meaning that the patient attaches to an event or a set of circumstances;
- to help the patient to define the criteria according to which he realizes his maladaptive self-assessments;
- to demonstrate to the patient how he selectively focuses especially on negative information when drawing conclusions;
- to illustrate to the patient how he disqualifies the obviously positive situations;
- to open up for discussion a precise area of problems, which the patient has permanently kept closed and which continues to influence his maladaptive patterns.

The therapist will apply the intervention techniques fluently and systematically: at the beginning of the session: establishing the problem to work on; during the meeting: discussion on possible solutions and on the adjacent change; and at the end of the meeting: summarizing the conclusions and homework (Leahy, 2003).

This is because one of the major goals of cognitive-behavioral psychotherapy, especially in the final stages of treatment, is to help the patient to identify and face maladaptive assumptions on his own, in order to avoid the recurrence of symptoms in the future (Leahy, 2003).

2. METHOD

2.1. THE SINGLE-SUBJECT EXPERIMENT

In international clinical research, the experiment with a single subject is a research method that has gained new territory, although in our country it is less used. This methodology of the single-subject experiment, bridges the gap between experimental psychologists and clinical psychologists, while promoting the practicing psychologist as a scientist (David, 2006).

The single-subject experiment aims to reveal the causal relationships between various independent variables and the responses of the human subject, seen as the dependent variable.

In this paradigm, the identification and study of the independent variables that have a weak, transitory or inconsistent effect on human behavior is abandoned, the attention being focused on the study of variables that have a strong, stable, clear and visible effect.

The identification of this effect becomes obvious when it appears visually from the developed graphs, for example, from the graphs that illustrate the differences between the level of the specific phobia, which a patient manifests at the beginning of the cognitive-behavioral therapy sessions and its level measured at the end of the therapeutic interventions.

In the experiment from this paper, we made two repeated measurements of the patient's specific phobia level; one at the beginning of the therapy and one in the end, just to graphically illustrate the patient's progress in the fight against dog phobia.

Summarizing, we can say that the single-subject experiment has two objectives. The former refers to the fulfillment of the experimental criterion: significant effect of the independent variables. The latter follows the clinical, pragmatic criterion: obtaining a strong, stable and visible effect of the independent variables on the elaborated graphs.

2.2. THE DESIGN OF CHANGING CRITERION

In this type of design, the effect of the psychological intervention is demonstrated by showing that the respective behavior changes according to the criterion established by the therapist. For example, if the therapist wants to produce a certain behavior, this behavior will be gradually approximated by the chosen therapeutic intervention (the behavior approximation technique will be used).

This type of design is used when the behavior to be assimilated is complex, which can be learned by the subject only in stages. Thus, after a period of 4–5 days, the therapist changes the criterion of intervention in the therapy sessions.

To describe the design of the criterion change in more detail, we can mention the following aspects: from the point of view of the frequency of the maladaptive behavior, which as therapists we want to change in our client, we will follow in the first five days the manifestation of this behavior (this process is considered the first criterion); in the next five days we will introduce the first technique for behavior change (considered the second criterion) and we will follow the evolution of the patient's behavioral manifestations. In the next five days we will introduce the second technique for behavior change (considered the third criterion) and we will follow the upward evolution of the patient's behavioral manifestations, towards the achievement of replacing maladaptive behavior with adaptive behavior. And further, the process can continue in the same way, as long as the therapist considers this type of experimental design appropriate.

In the single-subject experiment in this paper, conducted with a client with a phobia of dogs, we applied the criterion change design and at each cognitive-behavioral therapy session, the intervention focused on different techniques, hierarchically arranged in ascending order as intensity, so that at the end of the

sessions, the client manages to adopt a functional behavior, in relation to the object of her dog phobia.

For example, we first applied cognitive techniques to identify dysfunctional thoughts or to analyze the costs and benefits of a belief that led to the avoidance behavior of all types of dogs. Later, we moved on to imaginary exposures and then, with the help of video images, helping the client to take the first steps in giving up avoiding behaviors in the presence of a dog.

And the last stage of the therapy sessions, the last criterion for evaluating the progress made by the patient, was her meeting with a small dog, which she managed to pet, in the presence of its master.

2.3. THE CLINICAL ASPECTS SPECIFIC PHOBIA: DOG PHOBIA

Specific phobia is the disorder in which a person is inappropriately anxious in the presence of a certain object or a certain situation, which he/she tends to avoid. The tendency to avoid the stimulus is strong and in most cases, avoidance occurs, because the prospect of encountering the object or situation causes strong anticipatory anxiety (Craske *et al.*, 2006).

The treatment consists in exposure to threatening situations, as a form of behavioral therapy. The technique of systematic desensitization is used to reduce anxiety, by involving the subject in imaginary or real situations that produce the same fear, in conditions where the patient is relaxed and feels secure. Exposure to threatening situations can be gradual or maximal. As the patient acquires the ability to react to a previously stressful situation, the sense of personal efficacy increases, helping him to cope with other traumatic situations (McCabe & Antony, 2002).

The subject of the present study case, H.L., is a female, 32 years old, who works as an economist. She wanted to take part in these therapy sessions because, as she confessed from the first meeting, she is very afraid of dogs. Also, the client does not want to convey this fear to her 7 year-old daughter. There has not been a traumatic event in her life related to a dog, that has caused her physical injury and yet, she cannot help but think when she sees a dog that it might hurt or bite her and that she must run and avoid it. She is aware that, when she visits her friends, it is unpleasant for them to keep the dogs inside for the duration of the visit, but she says that she does not think she could ever love a dog, even if it played a well determined role of guard and protection. She also states that she feels the worst, because she cannot fulfill her daughter's wish to have a puppy.

From the first semi-structured clinical interview we had, it turned out that H.L. does not take drugs prescribed by the psychiatrist, she is not under psychiatric treatment, in fact she has never needed to go to a psychiatric consultation and she also does not consume drugs at all and alcohol only occasionally at social events.

The applied evaluation questionnaires reveal a high level of dog phobia (Dog Phobia Level Inventory), but do not lead to the conclusion of the existence of a depressive mood (Beck Depression Scale).

3. PSYCHOTERAPEUTIC INTERVENTION

3.1. ETHICAL ASPECTS: CONFIDENTIALITY OF THERAPY SESSIONS

Before receiving the consent from the client, regarding the beginning of the therapeutic sessions, we informed her about the limits of confidentiality, respectively of the subsequent use of the information in a paper, resulting from the activity within the experimental procedure.

The results obtained and the notes we took will only be used in a formula that strictly preserves the anonymity of the subject, so we will not use her full name, but only her initials. We also informed the subject about the duration of the experiment, the procedures used, the benefits and risks that may arise, as well as her right to withdraw upon request, whenever she wishes.

And because we needed an audio recording of our meetings, we previously asked for the subject's informed consent to make the recording, providing the guarantee that this recording will be used only for the purpose of writing up the results of the experiment, within the framework of a paper and proving that our meetings took place in the manner described in the article and that these are the results obtained, following the application of some techniques from cognitive-behavioral therapy in specific phobia.

3.2. THERAPEUTIC PLAN

We will briefly describe the program of the six sessions of cognitive-behavioral therapy, which we carried out with the patient.

In *Session 1* we performed the following activities:

- Identifying the object/source that the client fears and the extent to which she avoids it;
- Completion by the client of Sheet 1 – Evaluation of the type of fear;
- Completion by the client of the questionnaire for the assessment of the initial level of anxiety in the case of dog phobia;
- Identifying the installation, level, duration and nature of the fear;
- Identifying beliefs related to the anxiogenic stimulus/response;
- Identification of safety behaviors;
- Identification of dysfunctions in the social field, which derive from these behaviors;

- Completion by the client of Sheet 2 – Evaluation of the specific phobia, from which it follows:
 - evaluation of substance consumption, in case the client shows abuse or addiction to any substance;
 - assessment of the need for drug treatment.

In *Session 2* we performed the following activities:

- Explaining the fact that this disorder is quite common and can be effectively treated with relatively short-term therapies;
- Providing Worksheet 3, which includes information on the specific phobia and how cognitive-behavioral therapy can help;
- Explaining the costs and benefits of eliminating fear-completing the Cost-Benefit Analysis, for the strongest client conviction;
- Explaining the behavioral, cognitive and evolutionary models of fear acquisition and its maintenance through avoidance;
- Explaining the intervention through exposure;
- Applying the BETS Questionnaire – to test the level of the client's imagination and to know what level of representation to go for, in the imaginary exposure technique, when we will apply it in the following sessions;
- Completion by the client of Sheet 4 – Designing a hierarchy of the fear.
- Learning a relaxation technique: The relaxation technique used in this therapeutic process is a general relaxation technique, it is not a specific technique for dog phobia. We used more precisely the autogenous training (Shultz, 1933). Before performing the relaxation exercise, we asked the client to write down all the sentences that must be repeated during the exercise, so that she can later perform them alone as homework, for the next week.
- Homework: The client should perform this relaxation technique once a day, every day until the next session.

In *Session 3* we performed the following activities:

- Discussing the homework: what effects appeared, how did the client feel after performing the relaxation exercise; at what time of day did she choose to execute it and why;
- Identifying distorted automatic thoughts – using the Dysfunctional Thought Inventory;
- Analysis of each individual thought;
- Homework: Completion by the client of Sheet 5 – Self-monitoring of the fear.

In *Session 4* we performed the following activities:

- Discussing the homework: in each situation presented by the client;
- Reviewing the hierarchy of the fear;

- The beginning of the exposure procedure in the imaginary, during one session;
- Beginning of in vivo exposure during the session, depending on the possibilities;
- Identifying the safety behaviors used by the client during exposures;
- Encouraging the client to abandon safety behaviors;
- The exposure techniques will be carried out extensively in sessions 5 and 6;
- Identifying the client's negative automatic thoughts during the exposures;
- Beginning to challenge functional automatic thoughts;
- Homework: We gave the client a power point presentation with images that challenge her fears and she will have to watch it once a day, every day until the next session.

In *Session 5* we performed the following activities:

- Homework discussion: what effects appeared, how did the client feel after watching the presentation; what time of the day did she choose to do it and why; if someone else was present at the viewing, as a support for her;
- Continuation of the exposure in the imaginary or with the computer images, during the session;
- Encouraging over-exercise exposures;
- Encouraging the client to rely less and less on security personnel;
- Discussing possible problems that may arise in the future and the ways in which the client will be able to manage them;
- Homework: The client will have to continue eliminating safety behaviors and come home from work by the shortest route, which she has been avoiding until now, due to the possible presence of a dog (behavioral experiment).

In *Session 6* we performed the following activities:

- Discussing the homework: how did the client feel, both during the journey and after arriving home, if there was someone else present during the journey as support, even if it was an unknown person;
- Practicing stress inoculation during the session: designing coping statements, arguing against negative thoughts, formulating self-rewarding statements;
- Encouraging the client to formulate statements that develop self-efficacy;
- Completion by the client of the dog phobia final anxiety level assessment questionnaire;
- Final homework:
 - Encouraging the client to continue eliminating safety behaviors;
 - Encouraging the client to plan new in vivo exposures, relaxation exercises and self-monitoring of her performance within these exercises;

- Encouraging the client to continue identifying and modifying dysfunctional automatic thoughts.

3.3. PSYCHOTHERAPEUTIC CONSIDERATIONS

The actual treatment had a total of six sessions, with a duration of one hour and a frequency of two sessions per week. We first focused on evaluating the initial level of the client's anxiety, in the case of dog phobia. We have identified the moment when this strong fear has set in, its duration and the safety behaviors adopted in difficult situations. Thus, we made a differentiation of the specific phobia compared to other mental illnesses.

While recounting her experiences, the patient herself came to the conclusion that she overestimated the risks that meeting a dog on the street would generate, but she stated that if that dog starts barking at her, she certainly thinks that it will hurt her and therefore, she has to hurry to run away from that place. The situation is more dramatic, if she meets a group of dogs, then her fear advances to the level of panic and her heart starts beating very fast and she becomes terribly scared.

We could also find out in her experiences the lighter situations in which a dog is far from her and then she can avoid him in time. She recognized the fact that, permanently on the street, she is in a state of alert and her attention is even involuntarily directed towards the detection of some dogs, which could be in the area. The safety behavior adopted, that of bypassing the respective area, determines H.L. every time to be late in reaching the place where she intended to go, because she has to go around an entire area of blocks or continue her way on other streets, following a longer route to the place where she was going.

It was also extremely unpleasant for the client the fact that every time she went to visit her closest friends, who also baptized her child, she asked them to keep their two dogs closed in the yard, because she was afraid to enter the house, passing through that yard.

These two examples belong to the domain of dysfunctions at the social level, which safety behaviors, from the sphere of phobias, create for us. It was the strongest argument we could bring to the patient, to understand why it is wisest to fight to overcome this phobia and succeed in adopting functional behaviors in her social life.

During the sessions, H.L. trusted the therapy and she even enjoyed our understanding and support, benefiting from a solid therapeutic alliance. We explained to her that this phobic disorder is quite common and it can be effectively treated with relatively short-term therapies, such as cognitive-behavioral therapy. In this regard, we offered the client a worksheet, which included theoretical and practical information regarding the specific phobia and very importantly, the sheet also mentioned what she had to do as a patient, that the cognitive-behavioral therapy could help her to the maximum parameters.

The patient informed the therapist about the situations and objects of which she was most afraid, about the thoughts she had about them, as well as whether she was willing to endure the anxiety during the exposure, so that she could manage her fears better afterwards. The therapist in return would help the patient and assist her throughout the exposure sessions. However, the patient must do her homework, because in this way she would practice what she has learned during the therapy sessions. H. L. committed that she would respect these requirements during the therapy process.

We also explained to the client the behavioral, cognitive and evolutionary models of acquiring fear and maintaining it through avoidance. In the past, in the wild, fears of strangers, animals, heights and water had a highly adaptive value. So, our ancestors avoided contamination, poisonous stings, falls from cliffs or being killed or drowned. However, in today's modern world, these fears no longer have the meaning and value they once had. Now it is necessary to adopt adaptive behaviors to the society in which we live our lives.

And to prove this, we did a cost-benefit analysis with the client on her belief that any dog she encountered could seriously injure her. It turned out that the result of this belief is a deeply maladaptive behavior, which brings with it many costs: the lack of concentration on the initial goal, the waste of time and the delay in the proposed activities, the state of panic that often influences her child as well, who in fact was not afraid of dogs. The benefit was only the momentary state of safety, because it removed the source of danger. The awareness of the difference between costs and benefits determined H.L. to say to herself: "I want to find the strength to pass a dog without trying to run away".

And following her own desire in this way, the client became encouraged and determined to practice the exposure exercises. We organized these exercises in an ascending hierarchical order (Delmon-Viaud *et al.*, 2008), in the second stage of the therapy, during three sessions: 4, 5 and 6.

The first technique used was exposure in the imaginary. To test the level of the client's imagination and to know which level of representation to go to in the imaginary exposure technique, we applied a questionnaire whose purpose was to determine the intensity of the client's imagination. She must imagine the test items as vividly as possible, then evaluate the intensity of each image, referring to a 7-step Likert scale. Very important was the fact that she had to try to evaluate each image without reference to the previous ones. The test presents seven levels of representation: visual, auditory, tactile, kinesthetic, gustatory, olfactory and proprioceptive.

H. L. obtained a total score of 189, which places her among people with a high level of imagination, and of the seven dimensions, she obtained the highest score (i.e. 30) when evaluating visual images. This facilitated our exercise, in which by applying the technique of exposure in the imaginary we asked her to project herself into different situations, which caused her a high level of phobia.

We moved then to exposures using video images on the computer. This exposure was also thought and applied in an ascending hierarchical order. First, we viewed two power point presentations together, in which small dogs appeared in positions close to people. Also, each image had a text next to it, with a beautiful message about the friendship between man and dog. The main idea was that a dog is man's most faithful friend and it is by his side in any difficult situation.

The patient's reaction was positive and she stated that she is convinced that there are people who really love these animals and that there can be a close and beneficial relationship between an individual and his dog.

The next stage of the exposure exercises contained much harsher images, with dogs in more frightening positions, especially for a person with a phobia of dogs. So, in order to prepare her for this exposure, we remade the relaxation exercises (the autogenous training, Shultz, 1933) that she had learned since session 2 and then we started the presentation of the images.

One of the exercises, which H.L. learned in session 2, was to make fists with the fingers inside the palm for 30 seconds, when she saw a dog on the street. She had to focus on her palm, feel the nails in her palm and thus take her thoughts away from the dog she saw and move on.

When we started presenting the new images, the impact was very strong. H.L. clenched his fists so hard that you could see the traces of her nails in her palms when she opened them. She was constantly moving in her chair, turning her head, because she could not look at every image from the first moment and she spoke in an increasingly high tone. We started with the image at a small size and enlarge it consecutively on the screen three times. At some dogs she could see their fangs and she had the feeling, as we zoomed in on the image, that it was coming out of the screen into reality. We focused on this effect in the exposure.

There were 11 images in total and we told this to the client from the beginning, when we also explained to her that we can stop the presentation whenever she wants, but for the evolution of the therapeutic process and for her future wellbeing, it would be advisable to reach at the end with the exposure images. And she got to the end, even if we held her hand along the way. When it was over the client was exhausted, but we encouraged her that she would find the resources to take this step. She was very proud of the strength she resisted until the end.

The final point of our therapy sessions, on the last meeting, in the second half of the session, we went out to the park together. It was a beautiful day and there were people walking their dogs through the park. We chose a lady who had a small puppy, whom we asked to let her pet the puppy too. We started playing with the dog. H. L. was standing behind. We asked her to come near and slowly, when she is ready, touch the puppy with her hand. She came, but she didn't reach for the dog at all. The dog felt that something was wrong and had started to shake on the leash. His mistress began to talk to him and calm him down. In the end, while she was

holding the dog, H.L. also slowly stroked the dog. Then we got up and walked away. We asked her how she felt and she seemed to be beaming, she was smiling all of a sudden. She told us that she was happy she could do this, she would not have imagined before we worked together, that she would be able to get this far, that she would overcome her fear and pet a dog.

4. RESULTS

The results of this intervention materialized in several aspects. The psychological intervention led to an increase in the frequency of the adaptive behaviors and therefore to the remission of a part of the subject's symptoms. Furthermore, the remission of symptoms was objectively quantified, through the results obtained with the Dog Phobia Inventory.

This questionnaire was adapted after the Fear of Spiders Questionnaire (Szymanski & O'Donohue, 1995) and was designed to measure the level of phobic symptoms. The scale is one-dimensional and the total score ranges from 18 to 126. Each item is scored from 1 (not at all) to 7 (totally agree). The scale has two measures: the tendency to avoid any situations which assume the presence of the phobic stimulus and the real fear of the phobic stimulus. The higher the total score is, the more severe are the phobic symptoms.

We applied this inventory at the first session, before the start of the intervention procedures and then, at the end of the all six therapy sessions.

The differences found were considerable: the total score, obtained by adding up the values of the inventory items, decreased from 113 at the first application, to 55 at the last application, as it can be seen in the graph below.

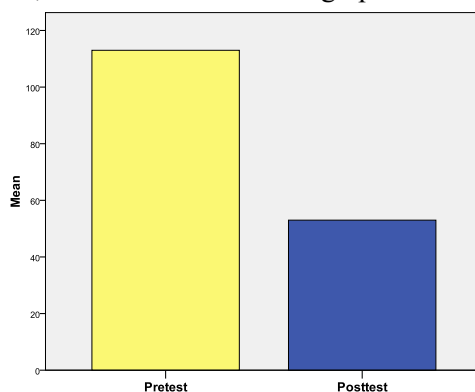


Fig. no.1. The remission of phobic symptoms

Also, in the segment of items referring to the tendency to avoid any situations, which would have assumed the presence of a dog, the total values

decreased from 53 to 23 and for the deep fear of dogs items, total scores dropped from 60 to 32.

These significant changes and decreases in values are reflected in the following graphs.

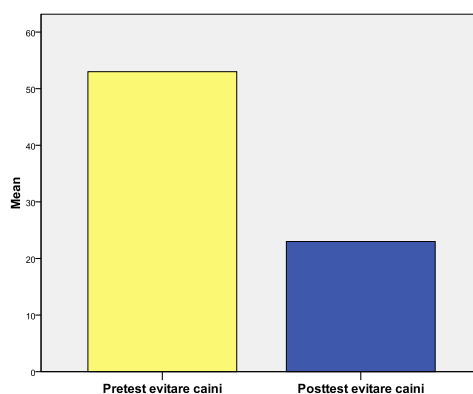


Fig. no. 2. The remission of avoiding any situations with dog presence

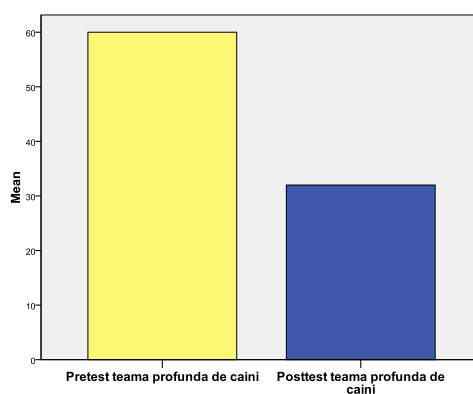


Fig. no. 3. The remission of deep fear of dogs symptoms

As it can be notified, the evaluation of the psychotherapeutic intervention, within the paradigm of the experiment with a single subject, satisfies two criteria:

- (1) the scientific and experimental criterion, by the fact that the change achieved at the behavioral level can be objectively quantified, by the results obtained with the Dog Phobia Level Inventory;
- (2) the clinical criterion, by the fact that the change is felt positively by the subject on whom it is aimed.

The obtained results show that the impact of reinforcements on human behavior is mediated by the way the subject perceives the reinforcements. If reinforcements are perceived as consequences of behavior, they have a greater

impact than if they are perceived as a determinant of it. This is because, in the second case, there is a manipulation perceived by the subject, which trains defensive mechanisms of opposition to the influence of reinforcements.

At the end of the cognitive-behavioral therapy sessions, H.L. had greatly reduced her phobia of dogs, regained her self-confidence and the belief that she could successfully face an encounter, even a random one, with a dog. She also ended the sessions with a high morale, declaring herself satisfied with her own achievements and the adaptive behaviors she managed to adopt. The treatment also improved communication between her and her daughter, as well as between her and her neighbors and friends who own dogs as well as pets.

We contacted H.L. one month after the end of the therapy sessions and she confirmed that she was feeling just as well and freed from the difficulties she had and that she continued to practice relaxation techniques.

5. CONCLUSIONS

It can be observed that around us there are many people from the non-clinical population, who have at least one diagnosable phobia throughout their lives. This could happen precisely because of this relatively high frequency and because people with specific phobia are less stigmatized than people with social phobia or depression. In many cases, people believe that their phobias are not entirely irrational and justify them by arguing that they have protective value. However, some fears, for example in our case the fear of dogs, can have significant interpersonal consequences and can prevent patients from performing important common activities.

The research results, regarding the effectiveness of cognitive-behavioral interventions for specific phobias, are more than promising. Rapid interventions lead to clinically significant improvements in 74–94% of patients (Leahy, 2010). The efficiency of the interventions is greater, in cases where the treatment includes extensive and in vivo exposures versus imaginary exposures. This was also demonstrated in the experiment from this paper, where it can be observed a significant decrease in the level of dog phobia, following the therapy sessions, which included in vivo exposures to the threatening stimulus.

It may happen that some people with a specific phobia refuse to carry out the exposures, because they need to be reassured that there is no risk involved. Although, it has not been reported yet that a patient has had a heart attack or gone mad during the exposures, the therapist can never offer absolute guarantees. He can ask the patient, as happened in the experiment presented in this paper, to evaluate the costs and benefits of the need for safety and to examine which of the patient's behaviors offered guaranteed results, so that they could also be used within the exposures.

Therapy for specific phobia can be finished after the patient's initial level of anxiety has decreased significantly, as was in the case with our subject after six sessions. The exposures should be performed to all items, on the hierarchical list of phobic stimuli and the patient should no longer exhibit avoidance behaviors. The frequency of the sessions can be reduced, as the patient assumes the responsibility of continuing the exposures within the exercises included in the homework, because in this way the goals of the therapy are achieved. In this way, the patient becomes aware that he can effectively manage the stimuli and situations, which until then he feared and which currently no longer represents an insurmountable problem.

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REFERENCES

1. BANDURA, A., *Social cognitive theory of personality. The coherence of personality: Social-cognitive bases of consistency, variability and organization*, New York, Guilford Press, 1999, p. 185–241.
2. BANDURA, A., LOCKE, E. A., *Negative self-efficacy and goal effects revisited*, Journal of Applied Psychology, **88**, 1, 2003, p. 87–99.
3. BECK, J., *Psihoterapie cognitivă. Fundamente și perspective*, Cluj-Napoca, Editura RTS, 2010.
4. BECK, A., *Cognitive Therapy and the Emotional Disorders*, New York, International Universities Press Inc., 1976.
5. CLARK, D. M., SALKOVSKIS, P. M., HACKMANN, A., MIDDLETON, H., ANASTASIADIS, P., *A comparison of cognitive therapy, applied relaxation and imipramine in the treatment of panic disorder*, British Journal of Psychiatry, **164**, 6, 1994, p. 759–769.
6. COMER, R., *Abnormal Psychology*, New York, Worth Publishers & Freeman Company, 2001.
7. CRASKE, M., ANTONY, M., BARLOW, D., *Mastering Your Fears and Phobias*, Oxford University Press, 2006.
8. DAVID, D., *Metodologia cercetării clinice. Fundamente*, Iași, Editura Polirom, 2006.
9. DAVID, D., *Psihologie clinică și psihoterapie. Fundamente*, Iași, Editura Polirom, 2006.
10. DAVID, D., *Tratat de psihoterapii cognitive și comportamentale*, Iași, Editura Polirom, 2006.
11. DAVID, D., SZENTAGOTAI, A., *Cognition in cognitive-behavioral psychotherapies; toward an integrative model*, Clinical Psychology Review, **26**, 3, 2006, p. 284–298.
12. DELMON-VIAUD, I., ZNAIDI, F., BONNEEL, N., SUIED, C., WARUSFEL, O., KHOA-VAN, N.G., DRETTAKIS, G., *Auditory-Visual Virtual Environments to Treat Dog Phobia*, University of Reading UK, Crossmod Project, 2008.

13. ELLIS, A., *Rational emotive behavior therapy approaches to obsessive – compulsive disorder*, Journal of Rational – Emotive and Cognitive – Behavior Therapy, **12**, 2, 1994, p. 121–141.
14. GELDER, M., GATH, D., MAYOU, R., *Tratat de Psihiatrie Oxford*, București, Asociația Psihiatrilor Liberi din România, Geneva Initiative Publishers, 1994.
15. KENDALL, P., *Abnormal Psychology*, New York, Pearson Education Inc., 1998.
16. LEAHY, R., HOLLAND, S., *Planuri de tratament și intervenții pentru depresie și anxietate*, Cluj-Napoca, Editura ASCR, 2010.
17. LEAHY, R., *Cognitive Therapy Techniques. A Practitioner's Guide*, New York, Guilford Publications Inc., 2003.
18. LEVY-BENNETT, J., BUTLER, G., FENNELL, M., *Oxford Guide to Behavioral Experiments in Cognitive Therapy*, Oxford University Press, 2003.
19. MCCABE, R., ANTONY, M., *Specific and Social Phobia. Handbook of Assessment and Treatment Planning for Psychological Disorders*, New York, Guilford Publications, 2002.
20. SARASON, I., SARASON, B., *Abnormal Psychology. The problem of maladaptive behaviour*, New Jersey, Prentice Hall, 1999.
21. SHULTZ, J.H., *Das Autogene Training*, The Journal of Nervous and Mental Disease, **78**, 1, 1933, p. 98–99.
22. SZYMANSKI, J., O'DONOHUE, W., *Fear of Spiders Questionnaire*, Journal of Behavior Therapy and Experimental Psychiatry, **26**, 1, 1995, p. 31–34.
23. VALLIS, T.M., SHAW, B.F., DOBSON, K.S., *The Cognitive Therapy Scale: Psychometric properties*, Journal of Consulting and Clinical Psychology, **54**, 3, 1986, p. 381–385.