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NEURO-LINGUISTIC PSYCHOTHERAPY IN TREATMENT OF ANXIETY DISORDERS

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Summary: Neuro-Linguistic Psychotherapy (NLPt) is a systemic imaginative method of psychotherapy with an integrative-cognitive approach, recognised by the European Association of Psychotherapy. However, few papers on this subject exist, especially in Polish, and for this reason we have written this one. We present the history and origins of the NLPt and the differences between the NLPt and the Neuro-Linguistic Programming (NLP), providing also an outline of the present state of the research. The theoretical background, the underlying mechanisms and the techniques used in NLPt are described in such fields as PTSD, phobias, OCD and traumas, e.g. the Reconsolidation of Traumatic Memories or the Visual/Kinesthetic dissociation protocol. The authors show also the existing research describing the successful ways of treating PTSD, trauma, phobias and other anxiety disorders. Even though the NLPt is a rather recent approach, there are promising reports showing its potential, efficiency and durability of effects in the psychotherapy of people suffering from PTSD (veterans), or of victims of assaults, rapes or traumas (e.g. violence or abuse during childhood). The authors of the paper also point to a strong need for a systemization of the findings of the psychological research corroborating the pertinence of the interventions applied in the NLPt, which would foster further development and that research and provide material for the evaluation of the efficiency of that approach.

Introduction

One of psychotherapeutic approaches, which established in the 1980s. is Neuro-Linguistic Psychotherapy (NLPt). This is goal-oriented approach based on the involvement of imagination and having integrative and cognitive character [1]. It is psychotherapeutic modality containing comprehensive training program and code of ethics based on the requirements of the European Association for Psychotherapy (EAP) and

recognised by the Association [2]. For several years we have observed a growing interest in research on NLPt [2–4]. Meta-analysis of previous studies, published in 2015, indicate the effectiveness of this approach [5]. These conclusions, however, are limited by the small number of high quality methodological studies.

The purpose of this article is to discuss the genesis and development of NLPt, to present method used in this approach of anxiety disorders treatment and identify psychological mechanisms that are method's foundation. Text shows differences between neuro-linguistic programming (NLP) and NLPt, we present a method to create neuro-linguistic models to work with phobias and traumas based on modelling process of managing a problem developed by people who obtained an improvement in their symptoms. Plasticity structure of experience — representation of memories in long-term memory (e.g. distinguishing perception from the perspective of the first and third person), and the phenomenon of memory reconsolidation were indicated as the mechanism underlying the described intervention. The article reviews current research on the effectiveness of NLPt in the treatment of phobias, PTSD (Posttraumatic stress disorder) and other anxiety disorders. Further research steps are also suggested.

Origins of Neuro-Linguistic Psychotherapy

NLPt genesis dates back to the 1970s. when John Grinder and Richard Bandler, creators of NLP, began to observe psychotherapy sessions conducted by Virginia Satir, Milton Erickson and Fritz Perls — initiators of: therapy of families, Erickson's therapy and Gestalt therapy, respectively. The purpose of their observation was to identify factors for effective therapeutic work. Grinder and Bandler made this, describing the structure of psychotherapy conducted by Erickson, Satir and Perls, which they distinguished from the content of the therapeutic process. The description concerned behavioural level — specific behaviours (NLP skill is understood as a sequence of behaviours). Skills such as building a contact, effective communication, coming out of the impasse or trance patterns, were structured as a sequence of consecutive steps by the creators of NLP. This enabled the reproduction of these skills by others. The reproduced sequences of behaviour, used by practitioners, brought the expected results [6].

This way of describing the psychotherapeutic work can be considered a complement to the demands posed, among others, by Carl Rogers, who showed "what" should be done in contact with the client, but did not specify this at the behavioural level (did not indicat how to do that). NLP in statu nascendi can thus be defined as the operationalization of rogerian client -oriented approach to psychotherapy. This is reflected in the perception of the relationship with a client in relation to postulate NLP: "the map is not the territory" (subjective reality does not reflect an objective one), derived from the work of Alfred Korzybski [7] and its development: good communication is to make contact in client's map of the world (subjective reality). It should be emphasized that the method of developing NLP was different from the origin of other therapeutic modalities. Gestalt and transactional analysis have been developed on the basis of the experience of clinicians and complemented with theoretical concepts on the mechanisms of psychopathology; cognitive-behavioural approach is based on existing and

structured psychological knowledge. NLP described often unconscious sequences of reputable therapists' behaviour and created models of therapeutic work on this basis.

The described models originally were used by the creators of NLP in the field of psychological help. Some of them (e.g. Model of building verbal and nonverbal contact) have began to be used also in areas such as sales, negotiation and people management, and they developed in those fields [8]. Further development of NLP occurred not in the academic and psychotherapeutic circles, but in business self-developmental environment. This also reflects the situation in Poland: NLP first appeared in the psychotherapeutic environment, including the Chair of Psychopathology and Psychotherapy of the Faculty of Psychology at the University of Warsaw in the 1980s [9]. However, in the following years, NLP was presented to recipients from outside the academic and psychotherapeutic circles as a method of manipulation or a panacea for the problems by the people not associated with professional psychological help. Because of this, NLP cannot be considered autonomous psychotherapeutic approach, but should be treated as a set of knowledge and techniques in the field of practical psychology that can be applied in everyday functioning in various areas of personal and professional life. Therefore, the works and activities of Bandler and Grinder were not embedded in the standards of the profession of psychotherapist as above-mentioned Gestalt and transactional analysis. The creators of NLP emphasized pragmatism and effectiveness of their methods and programmatic "antiacademicism" (practical action opposed to academic theorising), diminishing the role of ethical standards.

For this reason, in the 1980s, environment of German speaking psychotherapists (Austria) began to try to establish professional standards in the use of NLP methods in the context of psychological help. Works on the systematisation of existing knowledge and the creation of autonomous psychotherapeutic approach has been undertaken. Extended to theoretical concepts, NLPt was established as a specialised use of NLP in the field of psychotherapy [2]. Among the basic concepts, theoretical works and clinical experience of Erickson, Perls and Satir should be mentioned along with assumptions, originated from them, about the existence of independently functioning part of the identity (subpersonalities), admissible to awareness in varying levels. The ideas of William James, general semantics of Korzybski, Gregory Bateson's model developed by Robert Dilts as neurological levels, learning theory by Albert Bandura, Chomsky's transformational grammar, TOTE model descended from cyber works of Galanter, Miller and Pribram as well as cognitive constructivism trend are theoretical NLPt foundations [1]. Although NLPt is a synthesis of elements of interdisciplinary knowledge, it is a modality of psychotherapy that has a complete and autonomous system of understanding of what is health, what are the categories and causes of disorders, what means "cure" and which techniques are useful in supporting the changes.

Clinical effectiveness of Neuro-Linguistic Psychotherapy on the example of anxiety disorders

Reconsolidation of traumatic memories —mechanism of change: assumptions, theoretical foundations, research

Neuro-linguistic procedure of working with phobias and traumas was based on the observation of people suffering from specific phobias and comparing them with those whose symptoms has resolved. A key factor that differentiate both groups was the representation of

the event that triggered the phobia. People whose symptoms of phobia disappeared, evoked the representation from the perspective of a third party — the observer (so-called dissociation). The event recalled by people suffering from phobia was marked by the first person perspective — the actor (so-called association). This observation was used to create procedures for the treatment of phobias — "visual and kinaesthetic dissociation". In literature this procedure can be found under various names, to the context of clinical research proposes the formulation (with a described standardized procedure): reconsolidation of traumatic memories (RTM) [10] was proposed. RTM is applicable to the treatment of phobias and PTSD as in NLPt perspective both of these disorders are based on similar mechanism. The described intervention consists in a change of structure of memories. The change is made in perspective of representation of an event which is marked as beginning of disorder: from association (first person perspective) to dissociation (third person perspective). Dissociated perspective leads to a reduction in the severity of emotional reaction associated with particular memories. This mechanism is referred to as a significant factor of change (not a key factor) also in other therapeutic methods, for example by using the process of mentalisation — by which it is possible to garnish the perspective of the observer's own experiences [11]. Modern research confirms the existence of that phenomenon and the fact that changing perspective permanently affects the emotional load of autobiographical memories [12].

The described method is based on a mechanism different from the one on which therapeutic techniques commonly used for anxiety disorders are based. Their goal is to suppress the reaction with anxiety through classical conditioning, i.e. change of the response to the stimulus (memory), while the stimulus does not change. Today, however, it is more likely to indicate that a change of stimulus — restructuring memories can lead to more effective treatment, including effective prevention of recurrence [13]. Gray postulates that neuro-linguistic models do not result in suppressing, but a permanent change of the stimulus — i.e. memory reconsolidation [10].

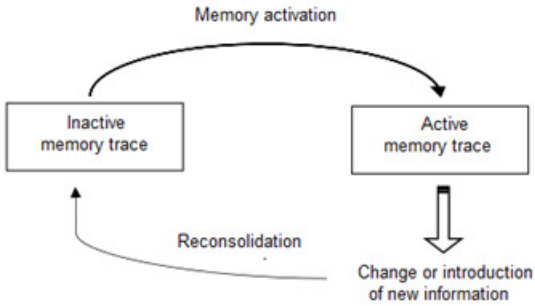

Figure 1. **Mechanism of memory reconsolidation**

To make the process of memory reconsolidation occur, it is necessary to activate the traumatic memories. Recalling memories from long-term memory makes it unstable for some time. So-called "Therapeutic window" opens — a period in which the memory trace of the memories can change and during which reconsolidation can be made (Figure 1). At the neurobiological level occurs a process of proteins production. Those proteins are responsible

for encoding memories in long-term memory [14, 15]. Activation of the memories and the mechanisms responsible for the modification of memory traces allows us to add elements, such as, dissociated perspective, a sense of control or changes in the selected aspects (e.g. colours, sequences, distance, size, and others). This information is assimilated, leading to assigning new meaning to the memories [16]. Neurophysiological studies show that the "therapeutic window" for changing memories opens up about 10 minutes after the memories or the stimulus presentation and closes after about 6 hours [17].

It is worth noting that repeated activation of aversive memories without changes can lead to exacerbation of symptoms. In this case there is also reconsolidation, but it strengthens the severity of the negative emotional reaction associated with the memories (person experiences the trauma once again which results in symptoms intensification) [18]. From the perspective of practitioner, it is important to observe psychophysiological indicators of the patient and his/her reactions after short-term activation of traumatic memories. This enables evaluation whether there was a full activation of memory trace, but at the same time do not lead to emotions intense enough to prevent the application of intervention. The procedure is initiated from the perspective of dissociation to reduce the emotional arousal of the patient. Studies show that reconsolidation does not occur if there is no interruption of the stimulus which triggers the trauma [19].

RTM detailed procedure is as follows: a patient is proposed to recall memories by using the metaphor of cinema. He is asked to imagine the cinema, where he is a spectator. The screen displays a video of a traumatic event in which the patient observes himself/herself — as the actor in the movie. In this manner the effect of dissociation is achieved. From the position of the spectator, the patient may modify the properties of his/her memories, for example, their colour (they can be turned into a black-and-white movie), the perspective from which it is observed, accelerating or slowing down the pace of play, change the volume of sound, etc. The patient changes the described properties in such a way which evokes the least intense emotional response. The specific modifications in this metaphor not only chang the structure of the memory trace, but also give the patient a sense of control, the lack of which is one of the risk factors for PTSD and acute reactions to trauma. The result of restructuring memories is a lasting change of associated emotions. Phelps and Schiller's research suggest that a change in the structure of memory trace causes a different reaction in the functioning of the limbic system (especially in the amygdala and hippocampus) [17].

Specific phobias — studies on the use of NLPt in the treatment of phobias

The clinical definition of specific phobias describes it as a persistent, disproportionate fear response in relation to a given stimulus or situation. The mechanism of a specific phobia development is based on classical conditioning — anxiety response is associated with the object or situation [20]. This reaction is disproportionate to the threat and may occur during a single traumatic experience. The classic approach to treating phobias is systematic desensitization consisting in replacing adverse response with neutral response (e.g. relaxation). Typically, the procedure uses grading of the strength of the stimulus triggering the reaction and increases its intensity over multiple sessions at the same time teaching the patient to relax. Response suppression through so-called dipping, i.e. bringing the patient into a

contact with his/her anxiety stimulus instead of avoiding it, is also used. Studies show that although the process associated with a contact in vivo has better dynamics of change than the use of imaginative techniques, the difference is blurred over time [21].

In the context of the treatment of phobias NLPt uses RTM procedure described earlier. It means a change in the structure of traumatic memories representation: from association to dissociation, which results in changes in the response scheme and a reduction of symptoms. The cause of phobia in this approach is not the traumatic event itself, but the manner of its representation — causing inadequate response.

The technique of working with phobias was examined for the first time by Einspruch and Forman in 1988 [22]. The experiment of authors showed that the 15-minute session using the NLP have an efficacy comparable with the method of systematic desensitization (with much longer procedure). In one of the most frequently cited research, the efficacy of the treatment of phobias using NLP techniques and systematic desensitisation was evaluated [23]. It has been shown that in comparison with the control group (clients awaiting for treatment) both methods have not helped. However, analysis of description of the intervention showed that the method referred to as visual-kinaesthetic dissociation protocol did not correspond to the original procedure, but it was an ad hoc adapted version of a technique known in NLP as anchoring [10]. Bigley and his co-workers [24] have tested the usefulness of NLP techniques to reduce claustrophobia in patients enrolled in the fMRI examination. After the intervention 76% of patients were able to undergo testing without the need of anaesthesia. It was also calculated that owing to the intervention the cost of fMRI examination decreased by 31.000 pounds (sum for the 50 patients who participated in the experiment). There is also a lot of case studies describing the effects of interventions derived from NLP in treating phobias [25–27].

PTSD and trauma — research using NLPt techniques

PTSD is an anxiety disorder which is the result of experiencing traumatic events, i.e. associated with actual experience or the potential threat to life, health or with sexual violation. Besides many case studies describing the use of the previously described RTM procedure [25, 28, 29], studies indicate its effectiveness in working with victims of rape [30], policemen [31, 32], fire-fighters [33], witnesses of genocide in Rwanda [34], and other groups of patients diagnosed with PTSD [35, 36, 37]. Research programme carried out by Marshall University and the Brain Resource Centre in New York is being finalised. Preliminary results indicate a high efficiency of treating the symptoms of PTSD, such as nightmares and "flashback" experiences, in time usually about half shorter than standard therapies, often limited to several sessions [38].

Other anxiety disorders and obsessive-compulsive disorder — use of paradigm and NLP(t) techniques

In relation to such anxiety disorders as obsessive-compulsive disorder, generalized anxiety or panic syndrome, some neuro-lingustic psychotherapists propose theoretical model different from most widespread ABC model (Activating trigger — Belief/thinking — Consequence/behavioural, emotional). This is APET model (Activating trigger — Pattern —

Emotional arousal — Thinking/belief) proposed by Griffin and Tyler [39]. This model assumes that after the exposure to the stimulus (Activating trigger) specific physiological and sensual pattern is activated (Pattern); this pattern, through the mechanism of classical conditioning, is associated with the stimulus. This is followed by emotional arousal which affects a fourth element: thoughts (Thinking/belief). The APET model refers to LeDoux studies on the method and rate of information flow via so-called upper brain way (stimulus — thalamus — cerebral cortex — amygdala — emotional response) and via the lower way (stimulus — thalamus — amygdala — emotional reaction) [40]. The upper way leads to occurrence of secondary affect, while the lower way leads to primary affect. Activation of the upper way (involving the cerebral cortex) is associated with the overt memory of emotional situation. Activation of the lower way — with the implicit memory of emotion, so, there is a priority of affect over cognitive processes. The influence of amygdala is especially important in the context of strong emotions (and also compatible with the APET model) as the primary affection, occurring faster, transmits information to the cerebral cortex, thereby triggering "pattern" in the APET model. Cognitive evaluation of the situation is a source of emotion and also affects the amygdala. This observation has also been confirmed in studies on affective priming paradigm. It has been found that emotional stimuli, even subliminal has impact (imperceptible to the subject) on intentional assessments and formulating judgments [41, 42].

In relation to the described model, neuro-linguistic tools for diagnosis and change allow to change the in imprinting, a scheme of action or unconscious associations and automatic response ("pattern" element). Besides case studies [43], effectiveness of NLPt is illustrated in the study by Stipancic, Renner, Schütz and Dond [2], in which, some of patients suffered from anxiety disorders.

In the studies concerning above-mentioned anxiety disorders, effectiveness of NLP and cognitive-behavioural techniques and results of the control group were compared [44, 45]. These studies have shown that the effect of interventions using both: NLP and cognitive behavioural techniques was comparable with the one obtained in the control group. It should be noted, however, that the intervention was performed by people with little or no psychotherapeutic experience. In addition, Krugman's study [44] included people suffering from fear of public speaking, which did not meet diagnostic criteria for anxiety disorder. Therefore, it is important to carry out further studies on the basis of standardized tools. It is also important that the participants meet the diagnostic criteria included in the DSM or ICD and people using the techniques and models are trained and practicing psychotherapists [2, 24, 44].

Recapitulation

Sceptical approach to NLP methods is still quite common, however, psychotherapeutic modality that meets professional standards has been developed on their basis. Research interest in these methods has been increasing in the last years, especially in the clinical context — as the study of the NLPt's effects. Studies cited in this article, show that this approach is effective in the treatment of mental disorders. Moreover, presented data show that the method of working with anxiety disorders originating from NLPt are based on

mechanisms proven in studies within basic psychology and modern scientific understanding of these disorders.

Yet, there has been not many studies on NLPt effectiveness. For this reason, it is important to continue scientific evaluation of this approach by the high quality research: randomized, with homogeneous clinical samples and with standardized intervention protocols. It also worth to systematise the results of psychological tests that indicate the legitimacy of intervention derived from NLPt (e.g. research on the change of perspective or on the methods of building contact, mentioned in the text) [46]. This method will allow to show the mechanisms that are the basis of changes in NLPt. Only such comprehensive evaluation based on scientific evidence will help to determine to what extent and in which cases NLPt is effective.

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