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Review Article

Neurolinguistic Programming in Practice: More Empirical than Magical

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Abstract

Neurolinguistic programming (NLP) is a psychotherapeutic approach, applying understanding and reformation of thinking and behavior in specific psychological and physical conditions. NLP differs from psychotherapies, such as hypnotherapy, counseling, and cognitive-behavioral therapy, in that NLP aims to alter the underlying thought pattern, eliminating the hindrance. Whether or not NLP should be merged with mainstream medical practice is a matter of ongoing debate. Nevertheless, the practice of NLP leads to useful communication and rapport between doctors and patients. It remains challenging to determine the efficacy of NLP as singular therapy or combined therapy via classical research studies into such subjective matters as fear, pain, and depression. However, for many patients, NLP simply "works".

This review is designed as a practical resource regarding NLP. It begins with a historical background (notable researchers and studies), reviews evidence-based research, presents indications and contraindications, highlights applications in specific conditions, such as: phobias (panic and anxiety disorders, claustrophobia, and acrophobia); post-traumatic depression and anxiety (injury, stroke, disability, and death); occupational stress; chronic pain; pregnancy; substance abuse; application and integration in medical practice; and training and certification. The design aim was to develop a succinct—go-to—resource regarding NLP for physicians, psychologists, health care providers, policymakers, and the general public.

Keywords: *Addiction; Depression; Pain Relief; Phobia; Post-Traumatic; Psychotherapy; Sports Injury, Stress; Substance Abuse*

Abbreviations

ABNLP: American Board of NLP; ACT: Acceptance and Commitment Therapy; ACQ: Agoraphobic Cognitions Questionnaire; ANLP: Association for Neurolinguistic Programming; BDI: Beck Depression Inventory; CBT: Cognitive-Behavioral Therapy; CSAI-2: Competitive State Anxiety Inventory-2; CT: Computed Tomography; DASS: Depression Anxiety Stress Scale; DSM–IV: Diagnostic and Statistical Manual of Mental Disorders-IV; ENSS: Expanded Nursing Stress Scale; GPR: Global Panic Rating; HADS: Hospital Anxiety and Depression Scale;

HIQ: Heights Interpretation Questionnaire; IBS: Irritable Bowel Syndrome; ICU: Intensive Care Unit; INLPTA: International NLP Trainers Association; MRI: Magnetic Resonance Imaging; NLP: Neurolinguistic Programming; NLPEA: NLP Association of Excellence; NLP VKD: Neurolinguistic Programming Visual-Kinaesthetic Dissociation; PASQ: Panic Attack Symptoms Questionnaire; PCL: PTSD Checklist; QoL: Quality of Life; RCT: Randomized Control Trial; REBT: Rational-Emotive Behavioral Therapy; VA: Veterans Administration

Preface

Would you if you could? What if there was an abiding—but mostly hidden from mainstream medicine—adjunctive therapy that might enhance patient outcomes? What if this therapy has been shown to be effective, probably effective, or possibly effective in specific psychological and physical conditions? Moreover, what if this therapy required no additional equipment or devices, little more in time to integrate, and no additional cost to implement? If such a therapy fits these criteria, should a health care provider be willing to consider or use it? *Would it be unreasonable or unconscionable not to do so?*

In some ways, neurolinguistic programming (NLP) is a vast, historical, and yet still evolving therapy. In other ways, it is straightforward and can begin by merely changing questions (that are asked of the patient by the physician) on follow-up visits. For example, changing from "What symptoms have you [the patient] been having?"; changing to: "What's been feeling better lately?" and then query about any negative symptoms.

NLP can also be used subliminally in fundamental doctor-patient interactions, such as the physician showing enthusiasm (giving the patient positive feedback) as symptoms improve while still showing earnest concern for symptoms that may be lingering or worsening. In other words—from a transactional analysis perspective—setting up the doctor-patient "game" differently: where the patient does not scour their mind and memory on the way to their office visit—seeking symptoms and complaints—believing in this obtuse way, they are being a "good" patient, a "helpful" patient. Also, their believing that their "job" is to observe and report symptoms, while the physician's job is to unravel the mystery of their condition. Setting up the "game" (the doctor-patient relationship) differently—with the focus being on "positive outcomes" considered and reported *first* (before any persistent and negative symptoms are reported)—may yield more positive outcomes. These two examples are elemental means in the design of NLP. The following review encompasses a more detailed and broader scope of NLP.

Introduction

Foundation of neurolinguistic programming (NLP)

Neurolinguistic programming (NLP) is a psychotherapeutic approach that engages in understanding and reformation of thinking and behavior. NLP was developed, ascertaining a methodology of personal excellence by following "pattern of thought and effective communication techniques" evinced by successful people. The term NLP represents the following: neurological process (neuro), language (linguistic), and behavior pattern modulated according to the situation (programming) [1,2].

A change in response is actualized by the modulation of the unconscious thought processes in the patient. NLP asserts that an experience is neither bad nor good, and any unexpected event adds value to one's life, hence enriching the individual.

The initial study of NLP was academic in nature. The commercial world soon embraced and promoted NLP. Its efficiency, accompanied by versatility in applying different life contexts and vigorous marketing, resulted in NLP's avid popularity in several countries, including those of North America. NLP is frequently applied in sales, management, and sports training. Moreover, in health care, it is a durable means of developing fruitful communication between medical practitioners and patients for maximum medical benefits. NLP is also

applied in various and diverse medical conditions, including irritable bowel syndrome (IBS), substance abuse, obesity and chronic pain [3], and in psychological conditions, such as phobia, trauma, anxiety, and depression [4].

The interventional techniques of NLP are practiced in several psychotherapeutic settings, such as cognitive-behavioral therapy (CBT), rational-emotive therapy (REBT), and acceptance and commitment therapy (ACT) [5].

However, NLP differs from psychotherapies, such as hypnotherapy, counseling, and CBT. Unlike hypnotherapy, NLP is implemented by the conscious use of language. NLP has some similarities with CBT, regarding philosophy—where both procedures invoke thought process changes in overcoming specific patient issues. The divergence of CBT and NLP is deliniated as CBT utilizing conscious decision–making of the client's process, whereas NLP endeavors to alter the underlying thought patterns of the client. Moreover, NLP unlike CBT, is content-independent [6].

History and development of NLP

In 1974, collaboration between Richard Bandler (a student of psychology) and John Grinder (an assistant professor of linguistics at the University of California) resulted in a new psychotherapeutic approach, which they termed neurolinguistic programming [4].

Bandler observed that the use of specific words and phrases seemed to stimulate a positive response in patients, whose psychotherapy sessions were recorded by Fritz Perls (a German psychiatrist, psychoanalyst, and psychotherapist). NLP was further developed by mindful analysis of works by three renowned psychotherapists, Fritz Perls, Virginia Satir (an eminent family therapist), and Milton Erickson (a globally-renowned hypnotherapist). The initial aim of NLP was in developing a methodology to achieve personal excellence, using a set of mind-based interventional techniques. Their observations were first published under the title *The Structure of Magic: A Book About Language and Therapy (*Bandler and Grinder, 1975) [7,8].

At the University of California, Santa Cruz, Gregory Bateson oversaw the growth of the NLP system. Other contributors at later stages include Leslie Cameron–Bandler, Judith DeLozier, Robert Dilts, and David Gordon.

The *New Code of NLP* was formed by Grinder and DeLozier, comprising a mind-body strategy. Bandler's focus was chiefly submodalities and Ericksonian's was hypnosis. Michael Hall (a cognitive psychologist) concentrated on neuro–semantics and mental states. Tad James (a contemporary practitioner of NLP) engaged clients in envisaging specific periods in their life, effectuating more productive therapy. Anthony Robbins (a practitioner of NLP) popularized NLP in seminars and motivational talks. To date, NLP has been extensively practiced as an adjunct therapy with respectable results. NLP lawfully attained its particular term and standing after a series of legal battles [9].

Discussion

Current studies supporting NLP's efficacy

Although there are limited studies regarding NLP, its effectiveness as a treatment method has been assessed with the available data. Following are some of the studies that investigated the effectiveness and practicality of NLP.

Kudliskis (2013) examined language and visualization techniques utilized in NLP in assisting children with learning disabilities (by enhancing learning). It was acknowledged that NLP techniques enhanced the children's learning with an altered positive mindset favorable to learning [10].

Some NLP practitioners have claimed that eye movements are dependable indicators in lie detection. Wiseman., *et al.* (2012) tested this claim in a series of three studies. However, no significant difference was found between groups with and without NLP after lie detection tests [11].

A systematic review regarding the influence of NLP on health and well-being was performed. Ten studies were included in this review, including studies on substance abuse, anxiety, weight management, morning sickness, and claustrophobia. The review concluded that compelling evidence did not reveal NLP as being unproductive; however, there were some indications that NLP interventions raised health and well-being levels [1].

Evidence-based research

Scientific research performed on NLP has displayed mixed results. Some studies have indicated benefits relating to NLP. One study regarding psychotherapy in patients revealed improved psychological symptoms and better quality of life (QoL) post-NLP therapy than a control group [12]. However, one of the reviews of ten studies on NLP exhibited less promising: only slight evidence was presented regarding NLP's efficacy in treating anxiety disorders and substance abuse and addressing weight management [13].

As described by Gray and Liotta (2012), a case study was conducted on a 30-year-old veteran of the Iraq war by William A. McDowell (Professor Emeritus and Chair of Counseling, Marshall University, Huntington, West Virginia, USA) through a personal communication (McDowell, 2010). The Veterans Administration (VA) had identified the veteran as having post-traumatic stress disorder (PTSD). The same condition was reported to the NLP therapist 1.5 years after the patient received standard medical treatment from the VA, including individual and group psychotherapy, with no reduction of symptoms. Pre-treatment scores on the PTSD Checklist (PCL)–Civilian Version were 90%. After the first NLP session, the scores fell favorably to 30%. After the third NLP session, all signs disappeared. After 30 days of treatment, the scores remained zero, and no symptoms were reported by the patient [14].

Indications for NLP

NLP has been applied in ameliorating several psychological and physical conditions, such as phobia, PTSD, occupational stress, chronic pain, and substance abuse. Moreover, although the innovative techniques of NLP are categorically therapeutic, their far-reaching features have made them practical in fields beyond medicine, including but not limited to persuasion [15], sales [16], negotiation, management training [17], and sports [18].

Contraindication for NLP

Scant research has been reported regarding any contraindications of NLP. Thus, a common-sense approach prevails. NLP is contraindicated for any patient who has responded adversely to previous NLP therapy or if NLP is deemed unsafe by a psychiatrist or psychologist for a specific patient's treatment. Moreover, NLP should not be wholly substituted for medically recommended and validated treatments.

NLP's effect on health outcomes

Despite its acceptance in specific healthcare and organizational settings, NLP has been opposed for being unconventional [1,19]. Many of these objections are associated with insufficient communication between researchers and practitioners [20] and regarding perceptions of NLP's research deficiencies. For instance, a systematic review examining ten NLP studies' effects, revealed research quality wanting and crucial reporting procedures missing [1].

Another NLP literature review focused on topics regarding researchers' understanding of NLP and whether or not experimental studies evaluated NLP interventions or specific NLP benefits distinct from the NLP research framework [19]. Such solicitudes are significant procedural restraints as numerous NLP skills must be applied from the a whole of the NLP teaching agenda [21,22].

Also, a meta-analysis by Grimley (2016) highlighted that larger-scale randomized controlled trials (RCTs) are essential for validating NLP [5]. Fifteen NLP professionals reiterated that there is 1) a deficiency in the quality of empirical evidence and academic thoroughness, 2) a failing of standardized explanations, 3) uncertainty in the training prospectus, 4) an unsettled professional practice code, and 5) a for-profit agenda [23].

Some health experts endorse NLP as a therapeutic and directive (guiding and teaching) intervention. However, due to the limited NLP research regarding health outcomes, there is insufficient evidence that NLP interventions improve health outcomes across various conditions and populations.

NLP's application in psychiatry and psychology (mental health conditions)

NLP in the treatment of phobia

Phobia is considered a prevalent mental disorder in females irrespective of age, and it is the second most prevalent disorder in males, as determined by the National Institute of Mental Health [24]. Phobia is described as illogical fear or anxiety in connection to specific objects (specific phobia) or situations (situational phobia), leading to an impulse of avoiding the trigger [6]. Bandler and Grinder (1979) stated that NLP and visual-kinaesthetic dissociation (V/KD) method (NLP-V/KD) could successfully cure phobias in less than one hour [13]. The process involved transforming the memory associated with a specific phobia to a dissociated memory—where the first–hand experience of that particular trauma could be viewed as having occurred to someone else in the past. This memory transformation is achieved by careful visualization of three situations by the patient: 1) before experiencing phobia where they felt safe, 2) where they experienced phobia, but such as happened to them in a movie (dissociated state) and 3) where they again felt safe after experiencing the phobia [6]. This procedure creates a mental place of safety where patients feel secure before and after experiencing the specific phobia. Thus, when the experience of trauma is recalled, it does not generate an unpleasant loop [3]. This phobia-cure model was formed with a sample pool whose phobias were cured [6].

NLP application in specific phobias

Several case studies, RCTs, and uncontrolled trials have appraised NLP's usefulness in curing specific phobias, such as public-speaking anxiety, panic disorder, claustrophobia, and acrophobia [1].

Public speaking

Results of an RCT, by Krugman., *et al.* (1985), implied that the fear of public speaking could be reduced significantly employing the NLP-V/KD method. Fifty-five university undergraduate students were randomly assigned to three distinct groups: 1) NLP single session, 2) self–controlled desensitization, and 3) waiting list control; they underwent four months of NLP-V/KD therapy. The outcomes were measured using various parameters, such as public-speaking anxiety, personal-report-of-confidence-as-a-speaker scale, modified behavior checklist, and observed global-rating of speech anxiety. The RCT outcome showed that there was a significant reduction in speech anxiety (including fear expectancy on the fear survey) regarding the parameters. However, no significant variation was noted between the groups [25].

Panic and anxiety disorders

Simpson and Dryden (2011) compared rational emotive behavior therapy (REBT) and V/KD. Their results indicated that V/KD could be used successfully as a panic disorder treatment [26]. A total of 22 adults—who met the Diagnostic and Statistical Manual of Mental Disorders-IV (DSM–IV) criteria for panic disorder—were randomly divided into two groups and subjected to either REBT or V/KD therapy (fast phobia technique) for four weeks. The results of the applied therapies were assessed using the following parameters: Hospital

Anxiety and Depression Scale (HADS), Agoraphobic Cognitions Questionnaire (ACQ), Panic Attack Symptoms Questionnaire (PASQ), and Global Panic Rating (GPR). At the post-test level, significant improvement was noted for both therapy groups at one-month follow-up [26].

Einspruch and Forman (1988) found that NLP reduced phobia and anxiety disorders in an uncontrolled pre-post design study [27]. A total population of 48 patients was either treated in a group (31 patients) for 8 weeks or as an individual (17 patients) for an unknown duration. The patients were assessed based on the Marks and Mathews Fear Questionnaire and the Beck Depression Inventory (BDI) before and after NLP treatment. The treatment modalities (group therapy and individual therapy) were reported to significantly reduce the severity of phobia and improve the depression score [27]. However, as the study's experimental methods documentation was unavailable, the results were compromised.

Konefal and Duncan (1988) found that NLP decreased self–reported social anxiety. The effect of 21 days of NLP therapy was measured using the Liebowitz Social Phobia Scale, post-therapy and six-months follow-up. Significant reduction in social anxiety, relating to fear and social place avoidance, was noted at both time points. However, as there was no sample control pool (a pre-test score was used from a different experiment), the interpretation of findings was considered unreliable [28].

Claustrophobia

The application of NLP therapy in claustrophobic patients undergoing magnetic resonance imaging (MRI) was appraised in an uncontrolled study by Bigley., *et al.* (2010). A total of 50 patients, who had previously failed to undergo MRI, were administered a single 1-hour NLP session. The outcomes were measured using Spielberger's State-Trait Anxiety Inventory. The results showed that 76% of the patients were able to undergo MRI after the therapy session, and a significant reduction in the anxiety score was realized by all participants. This report suggested that NLP can reduce claustrophobia and allow an MRI to be performed without general anesthesia in claustrophobic adults [29].

Acrophobia

Another RCT was undertaken by Arroll., *et al.* (2017) regarding NLP's application in acrophobia (an irrational fear of heights). Acrophobia is a chronic disorder, preventing specific people unable from performing daily tasks (such as climbing stairs or standing near a balcony), severely impacting the afflicteds' lives. Ninety-six participants, with an initial score of > 29 on the Heights Interpretation Questionnaire (HIQ), were selected for the study. The participants were randomly assigned: one group received a single, rapid NLP session (specific for phobia cure); the other group (the control group) performed 15 mins of meditation. The study's target outcome was the reduction of the HIQ value to < 26 after eight weeks of the intervention. The results showed that 34.6% of the participants in the intervention group achieved the targeted HIQ value. Thus, this study indicated that NLP is, potentially, an effective, economical, and rapid treatment option for acrophobia [30].

Summary of NLP's applications in phobias

All the above studies suggested that NLP is a promising treatment for phobia. Further research is required regarding the efficacy of NLP in treating social phobias. It is noteworthy that all types of phobia cannot be successfully addressed through NLP. An earlier study found that NLP was unsuccessful in treating snake phobia. However, a flawed experimental assessment of the treatment outcomes and the "reasonability of fear of snakes" could be credited, in part, to this study's failure [31].

NLP in the treatment of post-traumatic depression and anxiety (due to injury, stroke, disability, or death)

NLP's capability in treating depression and anxiety after a stroke or injury was reviewed. Stroke, which results in a disruption of cerebral function, is a leading cause of death and disability worldwide. The typical after-effects of stroke are depression and anxiety. To evalu-

ate NLP's and health education's effectiveness in lessening or eliminating stroke-related anxiety, Peng., *et al.* (2015) performed an RCT with 180 stroke patients, having experienced hemispheric, brain stem, or cerebellar ischemic stroke verified by computed tomography (CT) or MRI within three months [32]. The patients were randomly assigned to a control group and intervention group (that received four sessions of NLP). The results were judged by the remission of depressive and anxious symptoms.

NLP therapy was shown to be effective for a short period. Patients who received the intervention reported reduced anxiety compared to the control group—immediately after the treatment. No such difference was observed at 6-months follow-up. However, as NLP was combined with health education, the intervention group had heightened awareness and enhanced QoL than the control group in the long-term [32].

NLP has been described as successfully reducing anxiety in sports players after suffering physical injuries. Savardelavar and Kuan (2017) conducted a case study, evaluating the effect of NLP in remedying or reducing anxiety in two basketball players after injuries. Both of the players underwent six NLP therapy sessions, which consisted of collapsing anchoring, perceptual positions, and meta-model language patterns. The outcome was measured using the Competitive State Anxiety Inventory-2 (CSAI-2). Both players reported a reduction in previous dysfunctional thoughts associated with past injuries and competition-state anxiety [33].

The NLP technique dramatically reduced PTSD symptoms in clients from the military and emergency services in a pilot study by Wake and Leighton (2014). In the uncontrolled pre-post data set-up, 29 people underwent NLP therapy. The participants' responses were calculated using the Depression Anxiety Stress Scale (DASS) and the NLP Wheel of Life Scale. The data showed a significant favorable difference in DASS score before and after the intervention [34].

NLP in coping with occupational stress

Mohamad (2010) designed an uncontrolled trial, assessing the efficacy of NLP in treating occupational stress in intensive care unit (ICU) nurses. Working in an ICU is highly stressful and 92% of nurses in critical units report anxiety [35]. In this study, 60 volunteers were divided into control and intervention groups. The intervention group received eighteen NLP sessions. The outcomes were measured using the Expanded Nursing Stress Scale (ENSS). The result showed a reduction in stress in the interventional group compared to the control group. Thus, NLP demonstrated occupational stress reduction and enhanced the ability to adjust to adverse conditions [36].

NLP in improving physical health conditions

Chronic pain

The utility of the NLP-V/KD method in curing chronic pain has been illustrated in multiple case studies. In one such study, performed by Bolstad and Prochazka (2003), a female patient with a history of unresolved pain in the lower leg (and subsequent aversion to climbing stairs) was favorably treated using NLP. The use of an NLP phobia remedy ended the fear associated with chronic pain, leading to relief. In a second case report, by the same researchers, a female patient suffering from severe abdomenal pain ten months after surgery, was administered one NLP session, which eliminated the pain for two weeks [37].

Another case study, reported by Walker (2004), involved a patient with chronic post-traumatic pain after a motorbike accident. The memories of the pain were stored as visual/kinaesthetic synaesthesia, and the remainder of the event lead to the generation of pain sensation [3]. The patient's pain was successfully treated using NLP.

Pregnancy

Wheatley (1977) wrote that NLP was positively applied in treating hyperemesis gravidarum during pregnancy. Twelve women with morning sickness received a single NLP session of 2 hours, comprising NLP timeline therapy, outcomes/goal setting, and hypnotherapy. The NLP-application outcomes were assessed by the number of episodes of nausea and vomiting per day. Fifty percent of the women reported diminished morning sickness symptoms. Thus, NLP can be considered a low-cost, immediate-treatment modality for hyperemesis gravidarum [38].

Substance abuse

Gray (2002) evaluated NLP in treating addiction in patients. The treatment process involved "creating a connection" with patients for effective communication and modulating the patients' realities (metamodeling) [39]. Grey also mentioned an uncontrolled trial that validated NLP in addiction treatment. The trial involved 99 people who underwent 2–hours group sessions weekly and two one–on–one sessions over 16 weeks. The outcomes were determined through a urine test, assessing the presence of illegal substances before and after the intervention. However, this study failed to indicate any effectiveness of NLP in curing substance abuse [39].

How to apply NLP in medical practice

Building rapport: The most significant use of NLP methods in medicine is in enhancing understanding between patient and physician [40]. Implications about patients' representative systems—by which their intuitive skills are planned—assists the physician's related models for diverse patients, increasing interpersonal rapport [41].

Eliciting the target states: The physician can elicit the patient's target state, forming a full sensory depiction of the patient's anticipated health consequence. The patient must designate the target state and create visual, auditory, and kinaesthetic images of that state. Forming a kinaesthetic picture of the target state comprises progress by the patient from their current illness to depicting their future state of wellness. Christensen., *et al.* (1990) indicated that this technique requires the patient to accept, even temporarily, a physical state consistent with health and disruptive to the illness pattern. If the physician desires to strengthen that target state in the patient, the physician can play the "anchor" through a change in facial expression, voice manner, position on a chair, or a touch on the patient's arm [41].

Patient education: The NLP procedure for evaluating a patient's favored or primary representative system impacts patient education. Using select verbal and nonverbal indications mentioned above, the patient indicates to the physician the learning mode in which they will accumulate data about health status and treatment schedule. If the doctor matches the education mode to the patient's favored sensory system, the likelihood of acquiescence will be improved. [41].

NLP training and certification

NLP is a globally-known specialized qualification. Qualified NLP practitioners are permitted to act as an NLP practitioners professionally, assisting patients in several fields.

The discipline of NLP is self–controlled. NLP has several authorizing bodies: the Association for Neurolinguistic Programming (ANLP), NLP Association of Excellence (NLPEA), American Board of NLP (ABNLP), and International NLP Trainers Association (INLPTA). These bodies offer membership, develop standards, influence ethics and morals, and evaluate and recognize NLP training courses. Only qualified NLP trainers are authorized to grant recognized NLP qualification certificates.

NLP-practitioner certification is attained only after an extensive study period and by completing an NLP-practitioner training course. NLP training is typically 120–130 hours. NLP-certified trainers evaluate the competency of NLP trainees. Most NLP-certified trainers utilize direct observations and tests in determining if adequate and prescribed skill levels have been attained by the trainees.

Summary

Despite its vast popularity, NLP has been criticized for several reasons: 1) the method was developed based on the success of the former psychotherapeutic methods, 2) a notable absence of quantitative evidence regarding the efficacy of NLP, 3) case studies and trial reports are limited by small sample sizes, making the results less reliable, 4) lack of unified regulation, 5) small body of valid experiments and results, 6) inadequate number of long-term studies, 7) over-commercialization, and 8) unethical training structure at some centers—all weakening NLP's claim as a scientific method [5].

No doubt, it was unhelpful for the reputation and empirical medical status of NLP that the title of one of the first texts on the topic included the word "magic": *The Structure of Magic: A Book About Language and Therapy* by Bandler and Grinder (1975) [7].

Whether NLP should be welcomed or enacted into mainstream medicine is a matter of debate. There is inadequate evidence supporting the effectiveness of NLP in improving health during various sicknesses. However, David McDonnell, a medical doctor and NLP practitioner, stated in a publication (McDonnell, 2014) that NLP should be integrated into mainstream medicine to attain a holistic approach to treatment. The practice of NLP leads to effective communication and rapport-building between doctors and patients. These enhancements lead to a physician's better understanding the patient's problem and better designing a more effective treatment regime [42]. NLP might useful in circumventing specific psychological conditions. People who suffer from allergies or IBS are considered valid groups for NLP therapies [41]. As mentioned previously, NLP was developed and applied based on its effectiveness in alleviating various psychological issues. Nevertheless, more evidence from trials and studies with larger sample sizes is required to validate and establish NLP as a scientific method. Despite a lack of ample and impressive supporting data, NLP has proved to be a cost-effective intervention for specific conditions. As the emerging treatment paradigm centers around a comprehensive (holistic) approach to healing, NLP can be considered a potential constituent of such.

Conclusion

It is challenging to determine neurolinguistic programming's efficacy as singular therapy or in combined therapy through classical research studies into such subjective matters as pain, anxiety, fear, and depression. In the case of NLP, it is deemed helpful to consider the patients' personal perspectives and subjective experiences (not relying solely on data results and interpretations). For numerous patients with varying conditions, NLP simply "works". Neurolinguistic programming is most effective in cultivating and nurturing a positive patient-physician relationship, a cornerstone of the foundation of healing. Fundamental NLP principles and techniques are readily integrated into an established practice system, and would likely benefit a diverse patient population with no noticeable or dangerous side effects from its application.

Conflict of Interest Statement

The authors declare that this paper was written in the absence of any commercial or financial relationship that could be construed as a potential conflict of interest.

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