

# Neuro-linguistic programming: A review of NLP research and the application of NLP in coaching

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*The huge popularity of neuro-linguistic programming (NLP) over the past three decades has in some ways mirrored the growth in coaching psychology. This paper is part of a series of four papers in a special issue within ICPR that aims to explore NLP coaching from diverse perspectives, offering personal insights or reviews of evidence. As part of this process a pair of authors were invited to advance the case for and the case against NLP. This paper aims to adopt a critical stance; reviewing the concept of NLP, exploring the claims made by advocates and critically reviewing the evidence from a psychological perspective. In undertaking this review we completed a series of literature searches using a range of discovery tools to identify research papers, based on pre-determined search criteria. This review led us to the conclusion that unique NLP practices are poorly supported by research evidence.*

**Keywords:** *Neuro-linguistic programming, NLP coaching, critical literature review, preferred representational matching, eye-movement, fast phobia fix.*

## Introduction

FOR MORE THAN three decades trainers, sales people, therapists, and coaches have been drawn by the claims made by NLP (Bandler & Grinder, 1979). The approach has enjoyed enormous popularity, offering an alternative approach to psychologically training and has been widely used by commercial organisations, therapists and coaches.

NLP has over the past three decades been used by global brands including IBM, McDonald's, NASA and US Army. In the UK, academics have argued that it provides real value to educationalists (Tosey & Mathison, 2003). While in coaching there has been a profusion of NLP coaching books.

Yet despite this popularity, few in depth critical reviews have been undertaken, which have sought to examine some of the key claims of NLP. Those which have been published, for example Sturt et al., 2012, seem to have been largely unread by practitioners outside of the specific domain, such as health.

In the context of coaching, little empirical focus has been applied to the ideas, and

the approach remains popular across Europe (Passmore, Brown & Csigas, 2017). To undertake this review, we choose to focus on the distinctive features on NLP, as opposed to ideas and concepts which are published and credited to other approaches, or which are used across a wide range of approaches. The focus of this paper is thus restricted to the unique and distinctive features of NLP and NLP coaching, as opposed to the ideas that may be common across some or many practices, such as open questions, scaling or perceptual positions.

## Defining NLP

A useful starting point for any study of this kind is to begin by defining the key terms. However, Neuro-linguistic programming is difficult to define. Most texts do not offer a definition, or instead share a story in the hope of communicating what they believe NLP does. In essence NLP is a tool that delivers transformation change.

Grinder and Bandler's definition from 1980 was widely cast; '*The study of subjec-*

tive experience' (Dilts, Grinder, Bandler & DeLozier, 1980). The definition could include almost anything and fails to move us closer a clarifying what can be included in NLP, and what should be excluded.

A second example is the definition offered by Ready and Burton (2015, p.11) *'the study of the structure of your subjective experience...the art and science of communication ....the manual for your brain...'*

A third example shifts the focus towards a focus on excellence: *'NLP is the art and science of personal excellence. Art because everyone brings their unique personality and style to what they do and this can never be captured in words or techniques. Science because there is a method and process for discovering the patterns used by outstanding individuals in any field to achieve outstanding results'* (O'Conner & Seymour, 1990, p.1). In this sense, position NLP as being the outcome of a rigorous review process to identify evidenced-based practice across multiple fields, has echoes of the aims of psychology.

However, in some ways all of these definitions are unsatisfactory and fail to adequately delineate NLP from other approaches.

The very nature of NLP, has seen it adopt ideas and techniques from other disciplines to create a commercial model, suggesting that NLP is in some way unique, with claims of magical powers. In itself, the idea of an eclectic model, which is based on evidenced-based practice that acknowledges the origin or source of the idea is a noble cause. For the purpose of this paper, the focus will thus be to separate out common methods from unique NLP methods.

### **The foundations of NLP**

In the 1979, Richard Bandler and John Grinder published *Frogs into Princes* (Bandler & Grindler, 1979). They argued that outstanding psychotherapists acted on the basis of theory, which contributed to their effectiveness and enabled rapport with clients. Furthermore, they concluded that observation of the most skillful therapists would result in the discovery of common or core principles, which could be gener-

alised, verified on an empirical basis and put into therapeutic practice. This sounds a noble cause and one which reflects current research trends towards establishing common principles in coaching, and a desire to move away from multiple models, (cognitive behavioural coaching, solution focused coaching, psychodynamic coaching, gestalt coaching, MI, mindful coaching, etc) towards a unified approach; 'coaching'. Such a pathway of development has occurred in other domains, for example medicine, which has a single approach, as opposed to multiple 'schools' of training and practice within medicine.

For several years Bandler and Grinder observed the leading therapists of the time who including Fritz Perls, Milton H. Erickson and Virginia Satir. They gathered material, formulate

NLP tenets and hypotheses, which they believe were the common factors in therapy, and which had wide applicability to all communication.

A number of differentiating concepts arise within the literature. One is the idea that *'the Map is not the territory'*. The term was borrowed from Korzybski (1950), a linguist. This concept summarises the idea that each individual holds a unique internal representation of the world (the 'map') and not the world itself (the 'territory'). The maps that each person creates is limited and distorted through their past experiences and cultural context. Applied to behavioural change, the therapist's task is to understand and then work using the client's map to help them navigate a passage, both expanding their awareness and journeying from their condition to a more productive space.

The maps that people make of their world are represented by five senses: visual; kinesthetic, referring to tactical and visceral sensations; auditory, including noises and sounds; olfactory, including smell; and gustatory, including taste. Each experience in the world informs the continual development of the map. Bandler and Grinder suggested that each of us processes the majority of information

using one primary representational system. Further, they claimed that the most effective therapists matched the patient's primary representational system. These ideas, developed into primary representational system (PRS), are discussed below.

A second central concept is the idea of accessing cues, these are gathered from observing eye-movements. Bandler and Grinder suggested that careful observation of these movements would enable the NLP practitioner to unequivocally identify the primary representational system of the client and enable matching.

Having identified these hypotheses, most scientific researchers would move to the stage of formulating a hypothesis and seeking to test that hypothesis through a series of empirical studies. For a reason that is unclear, Bandler and Grinder, missed this step of the scientific process and moved forward to publish their ideas, as if they were scientific fact. One explanation that has been proposed is that Bandler was contemptuous of traditional scientific methods. This led him to reject the tradition methods of hypothesis and testing (Witkowski, 2010). As a result the claims made sound scientific in nature, but lacked the underpinning scientific testing.

### **Synthesis of previous reviews of NLP**

Over the past decade a number of other reviews have been conducted. These provide a useful insight into NLP and the science which underpins the work.

#### ***Early reviews of NLP***

One of the first reviews of NLP research was conducted in response to the growing claims from NLP practitioners of the effectiveness of NLP therapy. Einspruch and Forman (1985) in response called for a systematic review of the evidence. Only through this process could a clear and evidenced-based undertaking of the effectiveness of NLP could be established. (Heap, 1998) responded with a systematic reviewed the limited data available at the time. He noted the mismatch between the claims of

practitioners, which suggested miracle cures and the preliminary studies, which were yielding less promising results. The chapter concluded *'If it turns out to be the case that these therapeutic procedures are indeed as rapid and powerful as is claimed, no one will rejoice more than the present author. If however these claims are no better than the ones already investigated, then the final verdict on NLP will be a harsh one indeed'* (p.276). Subsequent studies have answered this question.

#### ***Health focused NLP***

In a health study, Sturt and his colleagues undertook a systematic review of NLP in health, prompted what clinicians saw as NLP practitioners targeting the sector offering services, from training for health professionals to therapies available for GP referral (Sturt et al., 2012). A UK Freedom of Information (FOI) request to NHS organisations to identify spending on NLP training or services over a three-year period leading up to 2009. The research targeted all 143 primary care trusts, 73 mental health trusts, 166 hospital trusts, 12 ambulance trusts, 10 care trusts, and 10 strategic health authorities. A total of 326 (79 per cent) NHS organisations responded to the request and the unpublished data revealed an NHS monetary spend of £802,468 on NLP-related activity. Over 700 NHS staff undertook NLP training during the time period with the majority (75 per cent) being in administrative/managerial roles. Clinical staff included counsellors and clinical psychologists also attended. Five trusts had developed NLP based services, with weight loss being the most popular.

The research team noted *'no systematic review of the NLP literature has been undertaken applying Cochrane methods. 17 The aim of this study was to conduct a systematic literature review and appraise the available evidence'* (Sturt et al., 2012, e758). The team gathered data from 1459 studies, and excluded 1345 as not relevant, reviewing 114 abstracts, reducing the list to 93 before a final set of 41 papers that were reviewed in their analysis. A further 31 of these papers were excluded as they

were descriptive in nature. This left a small sample but the researchers concluded based on their detailed review, in typical scientific language *'there is currently insufficient evidence to recommend use of NLP for any individual health outcome'* (Sturt et al., 2012, e763). For a clinical study this is damaging evidence, that form a comprehensive review of the health literature no robust evidence exists to support its use within health settings.

### **Psychological study**

In a comprehensive psychological study the researchers identified 315 articles of which 63 studies were published in peer-reviewed journals (Witkowski, 2010). Once the descriptive studies were excluded, the statistical data revealed that only 18.2 per cent showed results supporting NLP, 54.5 per cent revealed results non-supportive of NLP and 27.3 per cent offered results which could be described as 'uncertain'. In considering these results, and taking account of the bottom-draw effect, where unsupported data is more often not published, the evidence offered in support of NLP appears weak, with the positive results akin to what could be expected from the placebo effect.

Witkowski (2010) noted that the number of scientific studies had peaked during the 1980s and 1990s but had declining, as if *'the world of science was apparently losing its interest in the concept of Bandler and Grinder'* (p.64). The author was significantly more damning in his language in concluding his analysis: *'My analysis leads undeniably to the statement that NLP represents pseudoscientific rubbish, which should be mothballed forever'* (p.64).

In wide ranging Delphi study Norcross and Koocher (2006) surveyed a panel of 101 leading psychologists to identify the most discredited theories within mental health practice. Their list include NLP as a treatment for mental health conditions. NLP came 18th on the list of most discredited, but was beaten by interventions including 'Angel Treatment', 'Chrystal healing' and 'Dolphin mental health therapy'. Overall the researchers concluded experts had selected these interventions due to the lack of evidence to support their claims.

### **Educational studies**

An education review on the impact of NLP approaches in education the researchers found more positive results (Carey et al., 2011). In this first systematic literature review of research evidence the researchers drew on data from both peer review and self published sources from the NLP Research and Recognition Project.

The research team identified a total of 111 studies. These included both quantitative and qualitative studies, including individual case studies and self-report data. While this offered a more comprehensive coverage of the available evidence, it lacked the robustness of more traditionally structured reviews which would exclude single sample studies and experiential data. When reviewing the final set of papers, very few of the final papers were from peer reviewed journals.

Carey et al. (2011) concluded, the majority of published work was supportive of the use of NLP in schools and education. The authors went on to note that given the scale of the research, diverse methods and variation in the quality of the research they reviewed, their results should only be considered as 'an interim finding' and that more research was needed.

### **Counselling review**

Sharpley in a pair of studies (1984, 1987) reviewed the application of NLP in therapeutic relationships. His work included a review of 44 papers. His results revealed a total of six of these papers contained positive evidence in support of NLP. His conclusion questioned the value of NLP as a discreet method. With respect to individual tools, he suggested an PRS could not be reliably assessed by therapists and must be seriously questioned.

### **Overview**

In summary, a review of these sector specific studies, suggest there is little evidence to support the claims in health, psychology and counselling. In education the picture is less clear, but when considering the methodol-

ogy used, which included multiple non-peer review sources and single case studies, a question may also be raised over these findings.

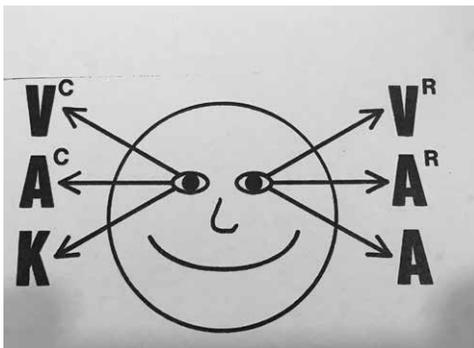
**Specific studies**

In addition to the large-scale reviews across health, education and therapy, we decided to also review a number of specific studies that have look at individual interventions within NLP. We selected eye movement and PRM as two interventions to review as they are considered essential ingredients of NLP (see de Rijk, 2019).

**Eye movement**

Proponents of NLP claim that certain eye-movements are reliable indicators of thinking patterns, including truth-telling or lying. According to this notion, a person looking up to their right suggests a lie whereas looking up to their left is indicative of truth telling. This is further explained by diagram X, based on the original claims made by Bandler and Grinder (1979, p.25; 1975).

Diagram 1: Eye movement.



Despite widespread belief in this claim, no research was undertaken to test its validity. A recent series of studies by Wiseman et al. (2012) examined this claim. In the first study the eye movements of participants who were lying or telling the truth were coded, but did not match the NLP patterning. In the second study one group of participants were told about the NLP eye-movement hypothesis whilst a second, control, group were not. Both groups then undertook a lie detection test. No significant differences emerged between the two groups. In a third study involving coding the eye movements of both liars and truth tellers taking part in high profile press conferences. Once again, no significant differences were discovered. In reviewing the results from the three studies the researchers claim the results of the three studies fail to support the claims of NLP, and this *'pseudo-scientific claim of eye movement can be reliably dismissed'* (Wiseman et al., 2012).

A more recent study (Ahmed, 2013) reexamined the claims regarding eye movement. Ahmed noted the criticism of Einspruch and Forman (1985), who argued that all 39 of the previously published studies (for example, Appel, 1983; Brockman, 1981; Cody, 1983; Ellickson, 1983; Dorn, 1983; Dowd & Pety, 1982; Ehrmantraut, 1983; Falzett, 1981; Green, 1981; Hammer, 1983 and Paxton, 1981) which had sought to test NLP claims were all false due to methodological concerns. These concerns included the researchers were not trained NLP specialists, or that the statements or inventions used were not consistent, in some way, with NLP methods. Ahmed used a student sam-

Table 1: Eye movement cue codes.

Vc	Visual constructed images	Vr	Visual remembered images
Ac	Auditory constructed sounds or words	Ar	Auditory remembered sounds or words
K	Kinesthetic feelings (also smell and taste	A	Auditory sounds of words

(Bandler & Grinder, 1979).

ple of 33 postgraduate MBA students, who were invited to answer a number of questions while their eye-movement was measured. The results show that, except for visual recall, less than half of the respondents exhibited the eye patterns (i.e. visual

construct, verbal recall, verbal construct, kinaesthetic and auditory digital), posited by the founders of NLP. Ahmed concluded '*NLP eye patterns as claimed by the founders, do not apply to this sample of students in Abu Dhabi*' (Ahmed, 2013).

Research questions to measure eye movement responses (Ahmed, 2013)	
1	'Do you remember clearly the house you grew up in?' (This question involves visual recall and the eye pattern should be towards the top right.)
2	'Can you imagine what the house would look like if it was bright pink (or had more levels)?' (This question involves visual construct and the eye pattern should be towards the top left.)
3	'Do you have a favourite song/music? Can you play that in your head?' (This question involves verbal recall and the eye pattern should be towards the lateral right.)
4	'Can you imagine what the song would sound like if it was played at twice the speed (or if the singer had a voice like Donald Duck)?' (This question involves verbal construct and the eye pattern should be towards the lateral left.)
5	'Can you remember how it feels like to walk on soft sand/carpet?' (This question involves kinaesthetic and the eye pattern should be bottom left.)
6	'Can you say the times table?' (This question involves auditory digital and the eye pattern should be bottom right.)

### ***Preferred representational matching***

A second commonly used model is Preferred Representation Matching [PRM]. According to Bandler and Grinder (1975) words, phrases and sentences are indicative of an individual's referencing of each of the representational systems. So for example the words 'green', 'see-through', 'spiral' and 'image' reference the *visual* representation system, while the words 'silent', 'ringing', 'moo' and 'blast' reference the *auditory* representation system. These two are part of the three systems; visual, auditory, and kinesthetic that humans use, and are sometimes known as VAK.

In his studies, Shapely (1984; 1987) reviewed the use of PRM in counselling domains. In a set of 15 studies using PRS Shapely concluded there was little supportive evidence for the use of the PRS.

Since these studies little further work has been done to review the application of PRS through a scientific lens. Further work within a coaching context may help further provide

evidence on our understanding about the claims for PRM.

In summary, in reviewing generic studies of NLP the evidence suggest that there is not enough evidence to support NLP claims for specific interventions such as eye movement and PRM. In light of the lack of robust evidence validating unique NLP models, we set to explore NLP with a specific focus on coaching research. Our aim was to draw together published studies and examine the empirical research within NLP Coaching.

### **Method**

The method for this review was to undertake a series of searches using commonly used databases, through the Henley Business School One Source search tool. The tool combines data from multiple search tools including EBSCO, Science Direct, Business Source, Emerald, Text-direct and others. A search of peer review papers published between 1980 and 2018 produced 19,154

items, using the initial search term ‘NLP’. However in reviewing papers from this list it was clear that the term NLP has multiple meanings, being used as an abbreviation for a variety of terms. The search was narrowed to ‘NLP and Neuro-linguistic Programming’. This reduced the number of items found to 224 peer reviewed papers in the period 1980–2018. This was further refined in a search to ‘NLP- Neuro-linguistic Programming – Coaching’. A total of 40 peer review papers were identified. A detailed review of these 40 papers was undertaken. This process is summarised through the PRME diagram (Figure 1) showing the source and process. The full list of papers is detailed in Table 2.

**Analysis**

In reviewing these papers a number of striking observations appear. Firstly, given the period of nearly 40-year period the number of papers is relatively small. This may in part reflect the wider issue of a lack of research within coaching, although the

appearance of a number of meta-studies and systematic reviews of coaching research (Theeboom et al. 2014; Athanasopoulou & Dopson, 2018), suggests the size of the literature pool has grown significantly in the past decade.

Secondly, the list is dominated by conceptual papers, with a lack of robust scientific design or traditional research methods being used to empirically test the ideas offered by NLP within the coaching domain. In considering the 40 papers included in Table 2, more than half were either conceptual papers, literature reviews or book reviews. Only two quantitative studies were found through this search, with a further seven qualitative studies. Not a single randomised control trial was identified. This compares with more than 40 RCT’s in coaching in the past twenty years, which is itself considered an under-researched area.

Thirdly, several of the papers only make passing reference to NLP, for example Reece (1999).

Figure 1: PRME diagram

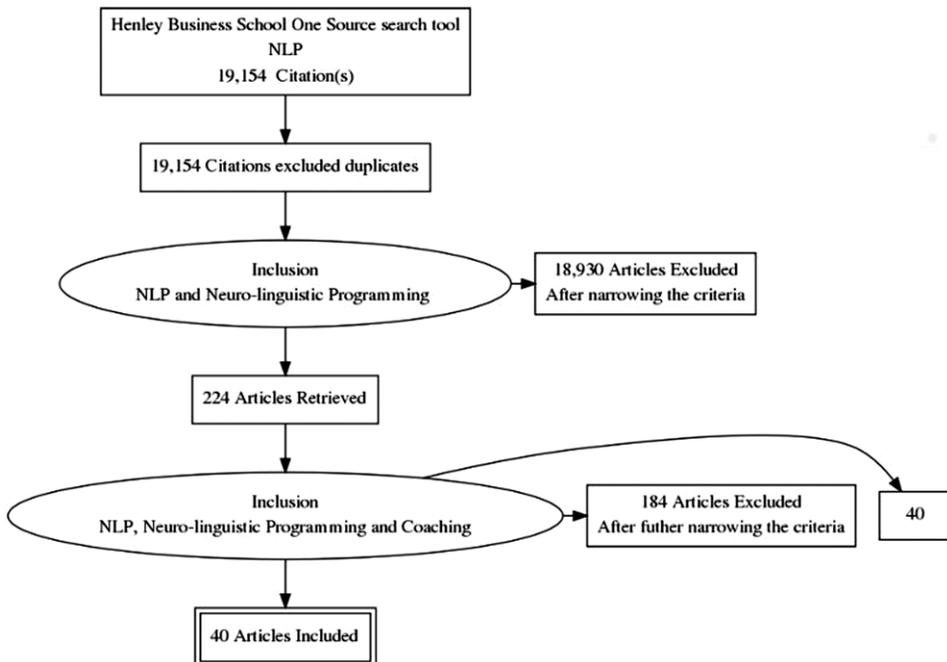


Table 2: Summary of NLP Coaching Peer review papers.

Research study	Brief summary
Grosu, E.F., Grosu, V.T., Preja, C.A. Iuliana, B. B. (2014)	Study of Romanian Judo team members using Grindler and Bander questionnaire.
Cassidy-Rice, J. (2014)	Case study of a business manager suffering with phobias.
Peng, T. Yun, L., Weiquan, W., Jincong, Y. Dong, W. Yang, X, Jinzhi, X., Zengzhen, W. (2015)	180 patient RCT, measuring depression and anxiety, and the awareness of stroke knowledge.
Kudliskis, V. Et Burden, R. (2009)	Case study reviewing application of NLP in sixth form (Year 13) students in one secondary school in the South West of England.
Blaskova, M., Blasko, R., Matuska, E. Et Rosak-Szyrocka. (2015)	Questionnaire survey of Universities in Slovak Republic and Poland, with suggestions for how teaching quality could be improved.
Boughattas, W., Mlssoum, G. Et Moella, N. (2017)	French language journal paper using experimental design with a sample of 20 junior judo competitors, with control group.
Grosu, E.F., Grosu, V.T., Popovici, S. Dumitrescu, M. (2015 )	Experimental design, 11 to 15 years, from Romania ski competitors. A planned study to explore attention and anxiety comparing NLP and a control group, and exploring gender differences. No results reported.
Linder-Pelz, S. Et Hall, M. (2008)	A conceptual and case study paper with a life coaching client.
Moliušytė, S Et Kvedaravičius, J. (2013)	A conceptual paper in Lithuanian exploring the potential of coaching and NLP to improve management performance.
Knight, J. (2012)	A conceptual paper review the application of NLP to qualitative research.
Moliušytė, S Et Kvedaravičius, J. (2012)	A survey of business managers and their assumptions about learning styles of employees. The results revealed manages assume employees have same learning styles as they do.
Laposi, E. Et Dan, I. S. (2014)	A review of NLP concepts in Romanian.
Joey, L. Et Yazdanifard, R. (2015)	A conceptual paper arguing the case for NLP.
Stockdale, S. (2013)	A qualitative study using NLP modeling techniques as a guide to the interview process with driving instructors exploring their teaching methods.
Tosey, P. Et Mathison, J. (2010)	Conceptual paper exploring links between psychophenomenology and NLP.
Bimba, A., Idris, N., Al-Hunaiyyan, A. Mahmud, R. B., Abdelaziz, A., Khan, S. Et Chang, V. (2016)	A literature review of modeling relevant to knowledge-based business management.

*Continued*

**Table 2: Summary of NLP Coaching Peer review papers** *continued*

<b>Research study</b>	<b>Brief summary</b>
Tee, S., Jowett, R. M. & Bechelet-Carter, C. (2009)	A mixed methods study, using survey and interview with 10 nursing students on the value of coaching as a learning approach.
Chuecos J. R. (2015)	A conceptual paper on NLP.
Alexanders, J., Anderson, A. & Henderson, S. (2015)	A literature review study that reported physiotherapists appreciate the importance of using psychological interventions within their practice.
Hodgson, D. (2014)	A qualitative study exploring cancer patient and carer's attitudes. Concluded that training curriculum enhancements must focus on developing care and compassionate behaviours.
Vlok, A. (2012)	A conceptual paper proposes a competency profile for innovation leaders derived from research in a South African, with reference to NLP among a wide range of other models.
Gray, E., Ekinci, Y. & Goregaokar, H. (2011)	A mixed methods study examining the impact of a leadership development programme. Coaches with therapy or NLP backgrounds performed better than those with no therapy background. However, managers on the programme did not perceive the coaching to have had a significant impact on their development.
Anderson, J. (2007)	A practitioner paper examining the role of imagination, calling and emotions in leadership, and the role intuition can play in helping leaders, with reference to an NLP exercise for leaders to help them stay intuitive.
Boussebaa, M. & Morgan, G. (2008)	Case study focusing on management development, passing reference to NLP.
Reece, R. (1999)	Interview with a medical doctor about his practice, with passing reference to use of NLP as a communications tool.
Linder-Pelz, S. (2014)	A qualitative study based on a sample of nine exploring the value of meta-modeling. The study concluded the approach was a valuable tool in coach competency development.
Segers, J., Vloeberghs, D., Henderickx, E., and Inceoglu, I. (2011)	Survey of Belgium coaches, sample of 83 exploring coaching practice. Noted the popularity of NLP coaching in Belgium, and the fact this was due to one of the first training schools in the country using this approach.
Kay, D. (2013)	Conceptual paper about a splinter method from NLP.
Jinks, D. & Dexter, G. (2012)	Conceptual paper about the limitations of coaching setting in coaching, with a passing reference to NLP.
Bailey, L. F. (2014)	Conceptual paper review qualitative research methods, with a passing reference to NLP as a possible research tool in qualitative research interviews.

*Continued*

Table 2: Summary of NLP Coaching Peer review papers *continued*

Research study	Brief summary
Turaga, R. (2016)	Conceptual paper offering a range of communications skills from open questions, non-verbal communications etc, with a passing reference to NLP.
Losada, S. J. V. (2009)	A Spanish paper in a practitioner journal advancing the case for role of NLP as a useful tool in coaching and consulting.
Titkos, C. (2012)	A conceptual paper exploring the role of personality development. The paper argues that NLP is a specialist tool for enabling this change along with psychodrama.
Tosey, P. Lawley, J. & Meese, R. (2014)	Conceptual paper making the case for 'clean language' as interview tool in qualitative research.
Shyamsunder, A., Anand, S.; Punj, A.; Shatdal, A. et al. (2011)	Series of case study about leadership development and the role of NLP as a communication skill forming part of a programme.
Fontannaz, S ( 2017)	Book Review.
Woodall, J. & Douglas, D (1999)	This wide-ranging paper examined ethical practice across leadership training. It noted the development of NLP, questioned its lack of ethical practice and also noted that few NLP practitioners were willing to engage in their research study.
Wruk, B. & Hebert, D. (2003)	Conceptual paper about the role of NLP tools in financial planning interviews to map client personality.
Hrop, S. (2004)	Book review.
Huczynski, A. A. (1993)	Conceptual paper review of management fads, with passing reference to NLP.

Fourthly, in a number of papers the authors make claims that are unsubstantiated. One example, a paper by Cassidy-Rice (2014) which presents a case study of an individual 'Nick Burnside' who following NLP training is 'cured' from a collection of phobias. The exact method is not described, nor how the phobia were diagnosed, nor the measures used. The author however claims an almost miracle effect of NLP which goes beyond the initial phobia, making the client both a superior boss and a super athlete: *'Among the interventions that helped were the removal of negative states, the changing of limiting beliefs, the*

*elimination of performance-inhibiting mental blocks and hypnosis. Such techniques have also helped him to achieve personal goals which he never thought possible, including grueling endurance races such as the Snowdonia marathon and the Hadrian's Wall ultra event, where he covered 68 miles in just over 17 hours... He has transferred this new positive thinking directly into his workplace, enabling him to undertake employee coaching across the organisation in areas such as time management, presentation skills, motivation, influencing and confidence building'* (Cassidy-Rice, 2014, p.39).

Of the papers which do, there are questions about the methods employed, which leave the reader with more questions than answers. One example (Peng et al., 2015) reviewed the use of brief NLP-health education to help post-stroke patients through a blended NLP and psych-education programme. The researchers were measuring anxiety and depression of stroke patients. The results from this study revealed an initial difference in depression levels, although in the follow-up stage the difference between the control group and the NLP-health education intervention group was not sustained. However, by including two interventions in a single study it is impossible to identify which was the active ingredient in bringing about the initial change; NLP or the education aspect of the programme.

One possible explanation for this lack of evidence is the bottom draw effect, where studies with unsupported hypotheses results are more likely to be either rejected by journals or not submitted.

### **Integrating the evidence**

So where does this leave the case for NLP coaching? The review of the research evidence within coaching suggests there is almost no evidence to support the multiplicity of claims made about its effectiveness as a 1-to-1 coaching interventions to facilitate behavioural

change. This contrasts with the evidence which has grown over the past two decades which does support the view that coaching has a small to medium effect size across a number of aspects of behavioural change (Theeboom et al., 2014). In reviewing the evidence from NLP, we may conclude that the lack of evidence suggests that NLP coaching has very little to offer coaching practitioners, as a separate and distinct set of interventions.

### **Conclusions**

In this paper we aimed to review the evidence for NLP and specifically for NLP coaching. Given this review, we have no hesitation in coming to the view that coaching psychologists and those interested in evidenced based coaching would be wise to ignore the NLP brand in favour of models, approaches and techniques where a clear evidence base exists. However, moving forward, we might take with us the dream which NLP offered of drawing the best practices from multiple traditions to create a unified model of coaching and behavioural change.

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