

REDUCING PERFORMANCE ANXIETY OF A FEMALE DANCER USING NEURO-LINGUISTIC PROGRAMMING AND NEURO-SEMANTICS: A CASE STUDY

Meisam Savardelavar¹, Garry Kuan^{1,2}

¹ Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, Kubang Kerian, Malaysia.

² Department of Life Sciences, Brunel University London, United Kingdom.

*Corresponding author: msdelavar@gmail.com

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ABSTRACT

Background: Neuro-Linguistic Programming (NLP) is a model for targeting changes in neurological connections, using language and imagination to restructure the clients' subjective experience. NLP has received increasing attention in the area of human performance. However, over the past two decades, a new approach named Neuro-Semantics (NS) has emerged as an NLP-stimulated approach that adopts a self-reflexive perspective of the clients' thinking processes.

Materials and Methods: To illustrate the application of NLP and NS in sport psychology counseling, this study refers to a case study involving a dancer suffering from performance anxiety. We started the intervention using NLP as a model of intrapersonal communication, working with the dancer's mental representation system. After our client had faced a higher intensity of anxiety, we altered the intervention to NS, which operates on a meta-cognition level of mental processes. This meta-cognitive application of NS could be vital as it could help the performers to have more control over dysfunctional thoughts and stop worsening emotional suffering and thus, the maintenance of the treatment can be sustained. The counselling lasted five months, involving 40 sessions involving two sessions per week, each lasting between 60 to 70 minutes. This study presented the client's responses when the treatment was changed from NLP to NS.

Result: Based on the interview sessions with the client and her choreographer, it was found that the client experienced less anxiety during her performance and her physiological signs like rapid breathing, trembling knees, sweaty and cold hands, and changes in her vision had also lessened. From a behavioural point of view, she participated in training sessions more frequently and with fewer performance errors. She also became more open to communicating with other dancers.

Conclusion: The intervention had successfully helped the client to control her anxiety and to perform with fewer errors.

Keywords: Self-reflexivity, dance performance, neuro-linguistic programming, neuro-semantic.

1.0 Introduction

Neuro-Linguistic Programming (NLP) is a model within psychology that emphasises studying the structure of human subjective experience; it encompasses both intrapersonal and interpersonal communication models (Bandler & Grinder, 1976; 1982; Cameron-Bandler, 1978). NLP is supported by a growing body of substantiating literature related to human performance (Blackerby, 2002). Based on the available literature, the use of NLP in the field of performance is becoming increasingly prevalent (Petracovschi & Rogoveanu, 2015). Besides, relevant research is also indicating an increase, not only in enhancing human performance but also in other major fields, including clinical psychology (Coe & Schahcoff, 1985; Einspruch & Forman, 1988; Karunaratne, 2010; Wake, 2008; Wake, Gray, & Bourke, 2013) and education (Kudliskis & Burden, 2009), where researchers have shown interest in the use of NLP (Witkowski, 2010).

A primary concern is that the NLP model contains numerous techniques that can be utilised to assist clients in their efforts to overcome their psychological difficulties; practitioners are trained to consider using this model as a toolbox. Based on observations, this study observes that when psychologists use such a technical counselling programme, it is not out of the ordinary that they get used to considering the problems as “something to fix” and act very technically and swiftly. A major concern with this kind of approach is that it can ignore the meaning that lies beneath the individuals’ psychological difficulties, which could increase the client’s underlying problem (Rizal et al., 2019; Savardelavar & Kuan, 2017; 2019).

The primary aim of this article is to contribute to the growing body of research evidencing the application and effects of NLP and NS interventions based on one experience of using NLP and NS to reduce performance anxiety in a professional dancer. This case study provides a detailed account of the dancer’s subjective experience throughout the entirety of the use of NLP as the first intervention followed by NS as the second intervention. We aim to inform counselling psychologists looking to adopt NS in their practice. The case reported here also details the challenges faced when using NLP, followed by the application of NS as an alternate model of counselling.

2.0 Materials and Methods

2.1 Case Study Design

The case study design is applied here because this approach would result in a deep understanding of the client’s problem and also, have better controls on the principles of the interventions (Andersen & Ivarsson, 2016; Savardelavar, Kuan & Rashidfard, 2018). Besides, due to the phenomenological (Tosey & Mathison, 2010) and constructionist nature of the NLP model (Savardelavar & Kuan, 2017), we assumed that the case study model of intervention, as a qualitative approach, is capable of doing justice to the rich, detailed, and personal accounts of our client’s subjective experiences.

We employed the collapsing anchoring technique of NLP, which worked based on classical conditioning theory (Fazel, 2013). Also, based on NLP’s theory about working more effectively

with the subjective structure of the clients, we used an eye accessing cues (EAC) model of NLP to find out about the more frequently used representation system of our client. In NLP, the representation system is defined as the sensory system through which a representation of a client's thoughts is accessed (Slater & Usuh, 1993). The representation system is categorised in terms of visual, auditory, and kinesthetic modalities of thought (Slater & Usuh, 1993). In this article, the terms 'thought' and 'mental representation' are used interchangeably.

The study received approval by the Universiti Sains Malaysia Human Research and Ethical Committee (Reference number: USM/JePEM/15040108), and followed the guidelines outlined by the International Declaration of Helsinki agreed by the World Medical Association and Council for International Organization of Medical Sciences (CIOMS).

2.2 Participant (Client)

In this manuscript, we call the client "Janet" to navigate confidentiality issues. At the time of the case study, Janet was a 23-year-old, experienced professional female dancer. She joined an established dance school when she was 9 years old and had achieved a high level of performance skill in modern dancing since she was 15 years of age. She had experience with cognitive-behavioral therapy (CBT) when she was 15 because of her experience with anxiety at school, despite the fact that she was considered to be a very good student and achieved all A grades in her education with near full marks. In addition, she grew up in an open-minded family and has social experiences with both genders, spending good times with her friends before facing performance difficulties. Janet was referred to the practitioner by her choreographer as she was involved in modern dance routines in the national team.

2.3 Intervention

2.3.1 Neuro-linguistic Programming (Collapsing Anchoring – Intervention 1)

Collapsing anchoring is an NLP technique that is employed to lessen the impact of debilitating thoughts in a certain situation by accessing an opposing desired emotional memory (Linder, 2010; Savardelavar et al., 2018). The collapsing anchoring technique works based on the NLP theory, suggesting that operating two radically different mental representations in three modalities of thoughts, which would simultaneously lead to those thoughts interfering with each other. This, in turn, would cause the collapsing of both thoughts into one response (Bigley et al., 2014), which is the client's original interpretation of the performance situation. In other words, the collapsing anchoring technique is about activating two opposing thoughts in the clients' minds at the same time. The steps of collapsing anchoring are:

- 1) Identify the situation in which clients face anxiety and ask them to represent it in their mind through the three modalities of thoughts.
- 2) Ask the clients to close their eyes and pay attention to the representation of their dysfunctional thoughts related to a critical performance situation.
- 3) Set an anchor for dysfunctional thought through touching the clients' knee as a kinesthetic anchor, when they are at the highest level of experiencing dysfunctional thought in mind.
- 4) Ask the clients to open their eyes and set the dysfunctional thoughts aside.

- 5) Ask the clients to close their eyes and think about a functional thought that could help them to perform optimally.
- 6) Help the clients to actively represent the chosen functional thought in their mind as much as possible through amplifying its submodalities (this term in NLP refers to the cinematic features of clients' thoughts in mind, sensorial representation of the qualities and properties of clients' sights, sounds, and sensations).
- 7) Set an anchor for the functional thought by touching the clients' other knee as the second kinesthetic anchor.
- 8) Repeat step 4.
- 9) Ask clients to close their eyes and reactivate the first anchor (related to the dysfunctional primary thought) and then immediately reactivate the second anchor (related to the functional thought).
- 10) Hold each anchor and let the clients just experience having two opposing thoughts and related emotions in mind, while holding the second anchor (the positive one) for a longer period.
- 11) Repeat step 4.
- 12) Check if the clients can bring to mind the first anchored dysfunctional thought through asking questions about the critical performance situation.
- 13) Re-access the functional thought's representation in mind, making it stronger by amplifying its submodalities and activate its anchor again.

2.3.2 Representation System and Eye Accessing Cues (EAC)

Based on the NLP theory of psychotherapy (Diamantopoulos, Woolley, & Spann, 2009), to make a change in the clients' thoughts, finding the most frequently used representation system plays a central role in this process (Grosu, Grosu, Preja, & Iuliana, 2014). To do this, NLP practitioners monitor the most frequently used eye-movement direction by the clients when they think about different types of sensory or cognitive information (Beaulieu, 2008) while communicating with the practitioners. This claim stems from the model of EAC by Bandler, Grinder and Andreas (1979). They suggested that eye-movements that are not monitoring an object in the environment indicate which thought modality clients are using (Florea, Florea, Vrânceanu, & Vertan, 2013). For example, moving the eyes up to the right side of the eye sockets indicates that the clients are representing information in their mind mainly through the visual representation system. Moving eyes to the left side of the eye sockets show that the clients are representing information in their mind mainly via the auditory representation system (Florea et al., 2013).

2.3.3 NLP Intervention Phase

In the NLP model, Bandler and Grinder (1982) proposed that the structure of mental representations (or here thoughts) should be changed or replaced with some other structures to change the meaning of the sensory-based information that is represented in the mind to improve human performance (Dilts & DeLozier, 2000). To achieve this, working with three main modalities of thoughts (visual, auditory, and kinesthetic) and their submodalities which represent their finer distinctions, is at the heart of the NLP model (Dilts & DeLozier, 2000). These help individuals with their dysfunctional thoughts.

During the two intake sessions, Janet told the practitioner, MS, that she had been feeling anxious and experiencing aggressive thoughts and emotions over a period of three months while training for the team performance. She found it hard to concentrate on her dance routine or communicate with the other dancers. Initially, the rationale for Janet's NLP intervention was based on her high level of performance anxiety at that time, leading to the deterioration of her dance performance. As a result, Janet was encouraged to learn the psychological skill of changing sub-modalities of the dysfunctional thoughts related to her performance. In order to achieve this, the collapsing anchoring NLP technique was employed to have access to the original interpretation of the critical performance situation.

2.4 Neuro-Semantics Intervention Phase (Intervention 2)

Based on the Neuro-Semantics (NS) perspective, the key to work with thoughts lies in the cognitive and linguistic contexts (referred to as a frame of reference in this paper) in which individuals give meanings to events that they experienced and then internalized them (Avni, 2011). These primary frames of mind help people to create meanings from sensory-based information represented in mind through three modalities of thoughts. By employing NS, redefining the meanings of the needs and adopting an observational perspective upon those needs helped clients to go to a higher level of abstraction in their minds (Hall, 1995; 2004). This, in turn, paves the way for gaining access to higher levels of frames, transforming primary definitions and meanings of dysfunctional thoughts (Hall, 2006).

In the context of this paper, NS suggests that other layers of meaning stemming from higher frames of mind are demonstrated through other levels of thoughts in the mind's screen, containing memories, values, and beliefs, which act as a frame to further understand the roots of dysfunctional thoughts (Hall, & Bodenhamer, 1999). To have access to these higher frames (negative and positive), we employed the "Therapeutic Meta-Stating" technique of NS (Hall, 2004). Meta-stating aimed to raise awareness of the higher dysfunctional frame of references that governed the meaning of performance-related thoughts. The second aim was to gain access to a new frame of reference, letting Janet redefine her dysfunctional thoughts and reinterpret the experience of the performance situation.

The steps of "Therapeutic Meta-Stating" are to:

1. Identify the dysfunctional thoughts that cause difficulties in performance.
2. Answer questions to gain access to the higher non-conscious level of dysfunctional representation in mind containing thoughts, memories, beliefs, and values that have contributed to an inadequate interpretation of the primary representation in mind, which stems from the construction of sensory-based information about the performance situation. The second stage was to trigger higher levels of abstractions to set a higher frame of reference that could transform primary interpretations and meanings.

The questions are a) What do you think or feel about your [dysfunctional] thoughts related to your performance? b) What do you believe about these thoughts? c) What do you understand and what identifications have you created about these thoughts you have in mind? d) How do you know why to call these thoughts dysfunctional?

3. Help clients to verbalise their understanding from the preceding process and observed the information represented in their minds or any changes in their current thoughts. This should help clients to experience a new frame of reference, containing any positive or negative memories, beliefs, and values and, also, to bring the new frame of reference into their conscious awareness.

4. Future pace the new subjective experience represented in mind. To do this, we must ask the clients to explain how they see and feel themselves in the future in general, and what and how would their understanding be regarding these new feelings and the perceptions in the performance situation.

2.5 Procedure

2.5.1 Intervention 1

The EAC of the client was evaluated by MS during two intake interviews by monitoring the most frequently used direction of Janet's eye movement while communicating. Furthermore, MS gained information about the nature of Janet's complaints related to dance performance, her family, and social situation as well. Also, whilst focusing on developing rapport with Janet, MS explained the nature of thoughts and the way they could affect emotions and performance based on the NLP [intrapersonal] model of communication (Wake et al., 2013). MS identified Janet's main representation system as highly visual and after that, kinesthetic; she represented information in mind mainly in the context of visual and kinesthetic modalities of thoughts while being involved in her dancing performance.

Janet met MS again one week later for the first session of the collapsing anchoring technique. The aim was to raise Janet's understanding and awareness about this technique and the way it could influence her understanding of her thoughts. This phase lasted for two introductory sessions, including one session in which MS interviewed Janet to allow her to ask any question about the intervention. Each session lasted between 45 and 60 minutes. The collapsing anchoring technique phase lasted for four weeks, with two sessions per week. Each session lasted for 60 minutes, including one interview session at the end of each week. To collect 'experiencing performance anxiety' data from Janet, MS sought regular meetings with her choreographer to provide information about Janet's changes in performance and behaviour. MS also gathered data in the interview sessions at the end of each week. This provided detailed information about Janet's experiences of the interventions as well as her subjective experiences during her performance.

2.5.2 Intervention 2

MS evaluated the level of Janet's performance anxiety and her performance during two intake sessions with her choreographer and herself. Besides, MS arranged a session in which Janet and her choreographer assessed their level of agreement about the topics they had discussed separately with MS. Furthermore, MS explained the NS model to Janet and her choreographer. He described the NS approach to working with subjective experience, so Janet was familiar with this model.

Following that, Janet met MS one week later in the first session of "Therapeutic Meta-Stating", targeting access to memories, beliefs, or any values related to Janet's dysfunctional thoughts.

This phase continued for two weeks, two times a week, and each session lasted for 60 minutes. The phase also included one interview session at the end of the week, which lasted for 60 minutes, to explore Janet's subjective experience, as well as her experience regarding the effect of the sessions on her performance. The next phase comprised two weeks of two sessions per week, each session lasting 70 minutes, during which MS encouraged Janet to verbalise her understanding of her new subjective experience during the intervention. In addition, MS conducted a one-hour interview session with Janet to talk about her internal changes and her response to them, as well as seeking her reflections on her performance. Future pacing was the third phase of the NS intervention. During this phase, MS met Janet for two sessions each week. Each session lasted for 60 minutes, including one interview session with Janet, in the course of which MS gained information about any changes Janet experienced in her thoughts and feelings. MS also met Janet's choreographer regularly to gain information about Janet's experience of anxiety during her performance and any other reflections the choreographer thought could be important to share.

3.0 Result

3.1 Intervention 1

Interestingly, in terms of the collapsing anchoring technique that had an element of visual imagery representation, MS realised that Janet had difficulties using this representation system and at the same time, experienced emotional anxiety, physical warmth, and behavioural anger, which MS considered as indicators of the activation of the kinaesthetic representation system. Furthermore, from the findings of the interview sessions, it became apparent that Janet experienced a period of visual representations that triggered the same three symptoms (anxiety, warmth, anger) while training for a dance routine in a team before she asked for help. As a result, it can be concluded that the visual representation system played a central role, causing Janet to experience performance anxiety. The paradox faced at this stage was that, from the EAC results, the visual representation system appeared to be the main NLP system that Janet relied on to represent information in mind, but it was this representation system that she had difficulties with, in terms of paying conscious attention to it and making a change in its structure and content, which opposes the NLP theory of learning (Fakehy & Haggag, 2016). In terms of experiencing performance anxiety, after eight sessions of work with the collapsing anchoring technique, no obvious differences were observed between Janet's performance anxiety before and after the intervention, based on her choreographer's observation and also, Janet's oral report.

3.2 Intervention 2

Based on the results obtained from the interview sessions every week with Janet as well as her choreographer's observation of her behavioural and performance changes, the results of applying the "Therapeutic Meta-Stating" of NS, could be divided into two categories, namely behavioural and cognitive changes. In terms of Janet's behaviour, the most important finding was related to Janet's performance changes. According to her choreographer, Janet started to perform dance routines with fewer errors and looked more confident after seven weeks of NS

intervention and paid less attention to the surroundings while performing in the dance group. She was also started to interact with other dancers with fewer reports of being upset by their comments.

With reference to the cognitive changes, the results could be categorised into two parts: first, the effect of the NS intervention on the content of Janet's thoughts and, second, the effect of NS on the structure of her thoughts. Analysed together, the findings suggested that there was an association between the "Therapeutic Meta-Stating" technique and the content of the mental representation. More precisely, Janet experienced five different mental contents during the time she was involved with the intervention. First, Janet experienced visual representations of her thoughts with intensified sub-modalities, representing in her mind the important people, who had been very critical of her. These included her older sister and two of her dance teammates. Even before we started the interventions, Janet had learned from the CBT to stop these visual representations in her mind and tried to ignore them. However, after being involved with the chosen technique she started to experience representing such mental content more frequently.

The second aspect of the content was revealed when Janet told MS about being able to consciously bring into her mind her dysfunctional thoughts while experiencing a lower intensity of anxiety. Hence, she became more aware of her auditory representation. However, Janet found that it was still difficult for her to tolerate the related feelings (referring to the kinaesthetic component of mental representations in NLP) that stemmed from the visual and auditory mental representations (Kuan, Morris Kueh, & Terry, 2018). In terms of the third aspect of mental content, the frequency and consistency of Janet's dysfunctional thoughts started to decrease, although she was still experiencing difficulty bringing into mind the more positive and functional thoughts (mental representations) of her performance and this was more difficult when it comes to auditory representation.

After another month of experiencing the mental content, we realized that Janet had relapsed back to the first aspect of the content of thoughts, experiencing the same sub-modalities she had during the first phase of experiencing visual mental representations mentioned above, but with the difference that her responses to the visual representations had changed. Although she represented visual images and sounds that she had experienced before as annoying ones, these representations did not contribute to her experiencing related dysfunctional emotion and interrupting her performance. In other words, her mental representations became emotionally neutral, especially the visual ones.

In terms of the last experienced aspect of mental content, Janet told us that she had experienced both visual representation and self-talk when she was preparing herself for a performance on stage after the sixth session of NS intervention. More importantly, she added that this mental experience happened when she did not get worried about the possibility of being exposed to negative thoughts. At this stage, we asked Janet to pay deliberate attention to the future pacing step of the intervention to let her mind know she could represent the way in which she wanted to think, feel, and perform.

Based on the findings related to the changes in the structure of Janet's thoughts while she was involved with the NS intervention, she appeared to have three levels of thoughts in mind. First, the primary dysfunctional thoughts had been constructed to yield sensory information being represented in the mind from the events in the performance environment. The second level of

thought represented the main non-conscious frame of reference that imposed meanings on the primary ones. Because these meanings were negative (memories related to being appraised very critically), Janet had stopped working on the second level, although this level of thought was still operating outside her conscious awareness, resulted in performance anxiety while dancing in the team.

Janet's third level of thoughts (stemmed from a positive frame of reference representing memories of her past optimal dancing performances, as well as success in social life) was constructed when we raised her awareness about the second level of thought. We then encouraged Janet to observe the second level and enhanced her understanding of the relationship between this level of thought and the way she was interpreting the performance events and representing meaning in her mind. To achieve this, MS asked Janet questions that she answered in Step Two of the employed technique. Based on Janet's answers to the questions, this process raised awareness about her primary dysfunctional thought, which in turn contributed to de-automatizing the dysfunctional emotions stemmed from the second level representation and reducing anxiety related to performance, over time. Taken together, we suggested that this enhanced awareness was the result of helping Janet to create a relationship between the way she was interpreting sensory-based information in her mind and her past memories as a dysfunctional frame of reference.

As a result of the findings from the interview sessions with Janet, we realized that her different levels of thought were represented in mind through different modalities. The major part of the meaning related to the primary thoughts was represented in the mind through the visual system. However, meanings associated with the second level of thought were represented by the kinaesthetic and auditory systems. Meanings for the third level of thought, which was the functional frame of reference, was caused by the activation of visual and kinaesthetic systems.

In terms of the relationship between different modalities of thoughts and different frames of reference (higher levels of thought) during the intervention, for the most part, working with the positive frame of reference (demonstrated as the third level of thought) led to intensifying the sub-modalities of dysfunctional visual representations and also, increasing their frequency in Janet's mind. For example, when Janet experienced reflecting on the first stage of her mental content, her visual sub-modalities started to become more vivid, colourful, bright, focused, dimensional, near, and unbounded. A hypothetical reason for this could be that accessing the new frame of reference, at first, destabilised the structure of dysfunctional visual representations. This was followed by the over-activation of the dysfunctional frame of reference (demonstrated as the second level of thought), which acted as the source of the imposed meanings on the dysfunctional visual representations. In turn, this intensified the sub-modalities of visual representations as the main system that Janet relied on to create information and meaning in the mind. Finally, at the fifth phase of the content of mental representation, Janet internalized her new frame of reference. As a result, this new frame started referencing the meaning of visual representations.

Overall, NS intervention could enhance Janet's awareness about the other levels of her dysfunctional thoughts. According to changes in the intensity of performance anxiety and the frequency of performance errors during team performance, bringing awareness into the non-conscious dysfunctional thoughts of Janet could de-automatise their negative impact on her performance, although the structure of these dysfunctional thoughts remained the same.

4.0 Discussion

4.1 Intervention 1

It is crucial to note that although NLP caused intensifying performance anxiety in our client, this finding cannot be extrapolated to the application of NLP in some other fields. In fact, in recent years, NLP research has included efforts to use NLP intervention in both education and sports training. In terms of education, an experimental study was published on the application of the NLP training program, including 30 students aged 19.6 years who needed assistance in reducing test anxiety (Fakehy & Haggag, 2016). The findings of the study supported the idea of the NLP program had a positive influence on reducing test anxiety. This finding was consistent with the study of Konefal, Duncan, and Reese (1992), who observed a significant decrease in trait anxiety followed by an increase in internal self-control in the participants by applying an NLP intervention. These findings are also in agreement with Stanton's (1998) findings, which suggested that one session of hypnosis and NLP can decrease severe anxiety.

However, as opposed to the ideas of some researchers who considered that it was unjustified to regard NLP intervention as a single-session cure for anxiety, experiments did not show further effectiveness of the NLP intervention in reducing public presentation anxiety compared to self-control desensitization (Krugman et al., 1985). Additionally, Petracovschi and Rogoveanu (2015) could not show that NLP could be considered as a promising model to help tennis players prepare for competition. This was because among 67 (Mean age = 24) Romanian male tennis players, who undertook an NLP program for mental preparation prior to participating in three competitions, 35.8% did agree with the use of NLP, and it was 31.3 % remained neutral about the efficacy of the NLP model for mental preparation. However, only a mere 4.5 % recognised the positive impact of NLP on their performance. Considering there are many types of techniques in NLP which are not evaluated in an academic frame and also, the result of this case study, there is ample room for further research in determining the efficacy of NLP across a wide range of high-performing contexts like sport, performing arts, and education.

4.2 Intervention 2

In the present study, we initially predicted that the collapsing anchoring technique of the NLP model, working with three modalities of thought and their sub-modalities, would reduce performance anxiety and enhance the dancing performance of our client, Janet. For the most part, this hypothesis was not supported in that Janet reported more frequent debilitating visual representations and related feelings during the NLP intervention. However, the relevance of the NS model was supported by the current findings. The evidence for this was Janet's reduced performance anxiety and her enhanced performance, which were supported by observations by her choreographer. A possible explanation for this might be that NS focuses more on the content of thoughts comparing with NLP (Hall & Bodenhamer, 1999), which works with the structure of thoughts and aims to change their meaning (Savardelavar & Kuan, 2017).

In this study, we became aware that working with the sub-modalities of dysfunctional thoughts was likely to cause an increase in the intensity of Janet's anxiety. If we accept that there is meaning underpinning of the sub-modalities of thoughts (Hall & Bodenhamer, 1999), it can be concluded that a weakness of the NLP model came from the omission of meaning that existed

beyond the sub-modalities by changing them directly. However, NS considered sub-modalities as semantically informed, and this permits researchers to access higher-level cognitions, which contains clients' memories, values, ideas, and thoughts (Hall & Bodenhamer, 1999). The way in which NS addresses the relationship between mental representations (related to thoughts), their sub-modalities and higher-level cognitions is in agreement with the findings from this study, showing that mental representations could come from any thoughts (Hall, 2006). This demonstrates the meaning of a nonconscious representation (thought) that intrudes into a performer's awareness while performing.

Shifting to NS as the second intervention, we changed our focus from conscious thoughts to the memories that Janet was holding it in her mind as a nonconscious higher level of mental representation. We concluded that our client brought the world into her mind by taking a performance referencing event and representing it in her mind as a sensory-based representation or primary mental representation of the outer events. Then, she put the represented event into frames of reference as memories, adding these to the frame of her mind known as the second level of thoughts in this study. Based on our observations, the activation of the second level of thoughts was framing the meaning of the primary representation.

However, our client, at first, assumed that the main reason for her performance anxiety was events and significant others in the dancing club. Therefore, the theory of NS about mental representations or thoughts (Hall, 2006) is in agreement with our findings that explain the meaning of the conscious thoughts that came from Janet's memories. This demonstrated the meaning of the non-conscious (second level) thoughts intruding into the client's awareness, as the meaning of her understanding of the outer world. Considering the lack of literature on NS, it is important to realise more clearly which components of NS are essential to its efficacy and make it clear in what sequence and by what mechanism of change this model works.

A limitation of this study is that, although the case study design of our interventions with Janet let us gain a deep understanding of the underlying mechanism of her thoughts and reflect on them, the present study is limited, in that the sample consisted of one case. Thus, it has limited generalisability to the whole population of dancers and athletes. So, further studies are recommended with more focus on the combination of qualitative and quantitative study designs. Also, considering this study is conducted based on the qualitative method, the researchers were the primary instrument of data collection and analysis. Therefore, researchers were left to rely on their instincts and abilities throughout most of this research effort. So, it could be beneficial to conduct research based on a combination of quantitative and qualitative methods to gain a more objective data to be able to use statistics to generalise the findings.

5.0 Conclusion and recommendation

In general, this case study showed that the collapsing anchoring technique of the NLP model increased Janet's level of performance anxiety, a professional dancer. The second major finding was that the application of a long-term program in NS, with emphasis on the self-reflexive element of the intervention, reduced the intensity of Janet's performance anxiety. This model of NS allowed Janet to observe and reflect on her thoughts and related emotions on the higher frame of reference level. These findings enhance understanding of the challenges that could be

faced by psychologists who may consider adopting NS in their practice. The experience of different content of mental representations related to thoughts and functions while applying a NS intervention demonstrated how this approach works on the root of memories. This provided evidence of potentially higher levels of frames of reference affecting the way Janet interpreted her sensory-based representation of the outer world.

Combining the self-reflexive element of the NS intervention with some other techniques of this approach could provide an influential framework to be used across related parts of the performance activity and life of clients. Future investigations could include the exploration of the effect of NS on performers and also, individuals' meaning-making frame of references in mind, regarding their field of performance. Future research could also include the influence of NS on the way individuals frame their understanding of issues related to performance.

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Declaration

Authors declare that there was no conflict of interest.

Authors' contribution

MS and GK conducted the study, and wrote the manuscript.

References

- Andersen, M. B., & Ivarsson, A. (2016). A methodology of loving kindness: how interpersonal neurobiology, compassion and transference can inform researcher-participant encounters and storytelling. *Qualitative Research in Sport, Exercise and Health*, 8(1), 1-20. doi:10.1080/2159676X.2015.1056827
- Avni, V. (2011). *Finding meaning through reflections on life experiences: guidelines for promoting family health* (Doctoral dissertation). Retrieved from <http://hdl.handle.net/10210/26018>
- Bandler, R., & Grinder, J. (1976). *The structure of magic (Vol 1): A book about language and therapy*. Palo Alto, Calif: Science and Behavior Books.

- Bandler, R., & Grinder, J. (1982). *Reframing: NLP and the transformation of meaning*. Moab, UT: Real People Press.
- Bandler, R., Grinder, J., & Andreas, S. (1979). *Frogs into princes: Neuro-linguistic programming*. Moab, Utah: Real People Press.
- Beaulieu, D. (2008). *Efficacy of eye movement integration therapy: A novel therapy for rapid, ecological integration of traumatic memories*. Retrieved From <http://www.psykosyntesforum.se/uploads/EMI-paper.pdf>
- Bigley, J., Griffiths, P. D., Prydderch, A., Romanowski, C. A. J., Miles, L., Lidiard, H., & Hoggard, N. (2014). Neurolinguistic programming used to reduce the need for anaesthesia in claustrophobic patients undergoing MRI. *The British Journal of Radiology*, 83(986):113-7. doi: <http://dx.doi.org/10.1259/bjr/14421796>
- Blackerby, D. A. (2002). *Help for troubled youth: Finding the missing piece to the puzzle*. Retrieved From <http://www.new-oceans.co.uk/ednet/>
- Cameron-Bandler, L. (1978). *They lived happily ever after: Methods for achieving happy endings in coupling*. Cupertino, CA: Meta Publications.
- Coe, W. C., & Schahcoff, J. A. (1985). An empirical evaluation of the neuro-linguistic programming model. *International Journal of Clinical and Experimental Hypnosis*, 33(4), 310-318. doi:10.1080/00207148508406967
- Diamantopoulos, G., Woolley, S. I., & Spann, M. (2009). A critical review of past research into the neuro-linguistic programming eye-accessing cues model. *Current Research in NLP*, 1, 8-22.
- Dilts, R.B., & DeLozier, J. (2000). *Encyclopedia of systemic neuro-linguistic programming and NLP new coding*. California: California University Press. Available online: <http://NLPuniversitypress.com>
- Einspruch, E. L., & Forman, B. D. (1988). Neuro-linguistic programming in the treatment of phobias. *Psychotherapy in Private Practice*, 6(1), 91-100.
- Fakehy, M., & Haggag, M. (2016). The effectiveness of a training program using neuro-linguistic programming (NLP) to reduce test anxiety in consideration of biological feedback. *International Journal of Behavioral Resesearch & Psychology*, 4(1), 173-177.
- Fazel, P. (2013). *Learning Theories within Coaching Process*. In Proceedings of World Academy of Science, Engineering and Technology. 80, 584.
- Florea, L., Florea, C., Vrânceanu, R., & Vertan, C. (2013). Can your eyes tell me how you think? A gaze directed estimation of the mental activity. *BMVA*. doi: 10.5244/c.27.60

- Grosu, E. F., Grosu, V. T., Preja, C. A., & Iuliana, B. B. (2014). Neuro-linguistic programming based on the concept of modelling. *Procedia-Social and Behavioral Sciences*, 116, 3693-3699. doi:10.1016/j.sbspro.2014.01.825
- Hall, L. M. (1995). *Meta-states, a domain of logical levels: Self-reflexiveness in human states of consciousness*. Grand Jct., Colo: Empowerment Technologies.
- Hall, L. M. (2004). *The source book of magic (Vol 2): Neruo-semantics patterns*. Clifron, CO: Neuro-Semantic Publications.
- Hall, L. M. (2006). *Winning the inner game: Mastering the inner game for peak performance*. Clifton, CO: Neuro-Semantic Publications.
- Hall, L. M., & Bodenhamer, B. G. (1999). *The structure of excellence: Unmasking the meta-levels of submodalities*. Grand Junction, CO: Empowerment Technologies.
- Karunaratne, M. (2010). Neuro-linguistic programming and application in treatment of phobias. *Complementary Therapies in Clinical Practice*, 16(4), 203-207. doi:10.1016/j.ctcp.2010.02.003
- Konefal, J., Duncan, R. C., & Reese, M. A. (1992). Neurolinguistic programming training, trait anxiety, and locus of control. *Psychological Reports*, 70(3), 819-832. doi:10.2466/pr0.1992.70.3.819
- Krugman, M., Kirsch, I., Wickless, C., Milling, L., Golicz, H., & Toth, A. (1985). Neuro-linguistic programming treatment for anxiety: Magic or myth? *Journal of Consulting and Clinical Psychology*, 53(4), 526-630. doi:10.1037/0022-006X.53.4.526
- Kuan, G., Morris, T., Kueh, Y. C., & Terry, P. C. (2018). Effects of relaxing and arousing music during imagery training on dart-throwing performance, physiological arousal indices, and competitive state anxiety. *Frontiers in Psychology*, 9, 14. doi:10.3389/fpsyg.2018.00014
- Kudliskis, V., & Burden, R. (2009). Applying 'what works' in psychology to enhancing examination success in schools: The potential contribution of NLP. *Thinking Skills and Creativity*, 4(3), 170-177.
- Linder-Pelz, S. (2010). *NLP coaching: An evidence-based approach for coaches, leaders and individuals*. London: Kogan Page.
- Petracovschi, S., & Rogoveanu, S. (2015). The opinion of Romanian male tennis players about the importance of mental training. *Timisoara Physical Education and Rehabilitation Journal*, 8(15), 22-27. doi:10.1515/tperj-2015-0012
- Rizal, H., Hajar, M.S., Savardelavar, M., Kueh, Y.C., & Kuan, G. (2019). The effects of progressive muscular relaxation on novice archers' state anxiety, heart rate and performance scores. *International Journal of Public Health and Clinical Sciences*, 6(4), 96-112. doi:10.32827/ijphcs.6.4.96

- Savardelavar, M., & Kuan, G. (2017). The use of neuro-linguistic programming as an educational-therapeutic programme: Two case studies. *Education in Medicine Journal*, 9(1), 49-58. doi:10.21315/eimj2017.9.1.5
- Savardelavar, M., & Kuan, G. (2019). A novel method for helping athletes to manage stress: the applied perspectives. *Coaching Journal*, 9(1), 56-58.
- Savardelavar, M., Kuan, G., & Rashidfard, S. (2018). Effects of neuro-linguistic programming imagery on kickboxers' performance. *International Journal of Pharma and Bio Sciences*, 9(2), 235-239. doi:10.22376/ijpbs.2018.9.2.b235-239
- Slater, M., & Usoh, M. (1993). Representations systems, perceptual position, and presence in immersive virtual environments. *Presence: Teleoperators & Virtual Environments*, 2(3), 221-233. doi:10.1162/pres.1993.2.3.221
- Stanton, H. E. (1998). Reducing test anxiety by a combination of hypnosis and NLP. *Journal of Accelerated Learning and Teaching*, 23, 59-65.
- Tosey, P., & Mathison, J. (2010). Exploring inner landscapes through psychophenomenology: The contribution of neuro-linguistic programming to innovations in researching first person experience. *Qualitative Research in Organizations and Management: An International Journal*, 5(1), 63-82.
- Wake, L. (2008). *Neurolinguistic psychotherapy: A postmodern perspective*. London, UK: Routledge.
- Wake, L., Gray, R., & Bourke, F. (2013). *The clinical effectiveness of neuro-linguistic programming: A critical appraisal*. Milton Park, Abingdon, Oxon: Routledge.
- Witkowski, T. (2010). Thirty-five years of research on neuro-linguistic programming. NLP research data base. State of the art or pseudoscientific decoration? *Polish Psychological Bulletin*. 41(2), 58-66. doi:10.2478/v10059-010-0008-0