

Applying Neuro-Informed Career Focused Counselling: A Single Case Study Analysis

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Abstract

This article will present findings from a single case study analysis on the application of Neuro-Informed Career-Focused Counselling proposed by Luke and Field (2007). A search of Google Scholar for academic sources on the application of neuroscience to career counselling returned few publications. The only publications with neuroscience and career counselling in the title included a book chapter by Luke and Field (2017) and an article by Dickinson, Miller, and Beeson (2021). There are further articles that reference neuroscience in career counselling; however overall, the contribution of neuroscience to career counselling remains limited. This article hopes to address this gap in the literature by exploring how theories from neuroscience can be applied in career counselling. In response to suggestions that career counselling requires further research and models to prove its effectiveness (Bernes, Bardick, & Orr, 2007; Guindon & Richmond, 2005). This article proposes that neuroscience may be a fruitful discipline to explore for this reason.

Keywords: Neuroscience, career counselling, bullying

The primary research conducted for this paper involved an in-depth analysis of a single case study participant. The participant had recently left a position in a pharmaceutical company in which she was the victim of bullying by her line manager for about two years. The participant was working with a therapist to process the experience, and she also wanted career counselling to assist with rebuilding her career. In the following sections of this article background information to the study will be provided followed by details of the research philosophy. This article will then discuss three phenomena described via neuroscience which can lead to helpful insights for career counsellors. The first is the neuroscience of safe and trusting relationships, the second is a neuro-informed assessment of the stress response, and the final component is the neuroscience of narrative construction. It is proposed here that an instance of bullying is a suitable opportunity to study these three phenomena in career counselling as bullying has an intense effect on a victim's nervous system which greatly impacts career decision making, as will be discussed later. Throughout the course of this article direct

quotes from the participant will be included to support the secondary research being presented.

Career Counsellors are Applied Neuroscientists

Prior to discussing next steps, it is worth noting that Cozolino and Sprockay (2006) proposed that professionals working in helping professions such as adult education and therapy, are unwitting applied neuroscientists. By this they mean that the work they do with clients and students can stimulate conditions in the brain which can result in neuroplasticity. With this view in mind, it is proposed here that career counsellors are also applied neuroscientists and it is therefore helpful to have a general understanding of the neuroscience of learning (Miller, 2016). As we work to help our clients develop new ways of relating to their career, we can also appreciate that we are helping our clients to create new neural pathways in their brains. We can use this information as a means for motivating our clients, and it can provide another lens through which we can explore the practice of career counselling.

For example, we can explain to a client that a moderate

level of the stress has been shown to stimulate neuroplasticity via an increase in the production of neurotransmitters and neural growth hormones which have the effect of enhancing neural connections, and cortical reorganisation (Cowan & Kandel, 2001; Myers et al., 2000). To make use of this information in career counselling the first step for the counsellor is to create a bond with the client based on trust and safety (Cozolino & Sprockay, 2006). With this in place, the counsellor can encourage a client to take action via the creation of moderate levels of stress, which in turn will create the conditions necessary for learning via the release of dopamine, serotonin, norepinephrine, and endogenous endorphin production (Kilgard & Merzenich, 1998; Kirkwood et al., 1999; Huang et al., 1999). This is an example of a helpful model of neuro-informed career-focused counselling which career counsellors can use in their work with clients.

Although moderate stress is helpful for learning, severe stress is counterproductive to the learning process. In the case study presented here, the participant was experiencing hyperarousal of the stress response due to workplace bullying by her line manager. Furthermore, besides hyperarousal of the stress response being detrimental to the learning process, it also has a host of other negative consequences for an individual relating to long term mental and physical health as will be discussed here in further detail

(Miller et al., 2007).

Career Counselling , Personal Counselling, and Trauma

At this juncture it is important to reiterate that the participant of this study is working with a therapist to address the psychological impact of bullying which can be traumatising (Nielsen et al. 2015; Nielsen & Einarsen, 2012). It is not suggested here that it is the career counsellor's responsibility to directly address the trauma. Nonetheless, Powers and Duys (2020) advised career counsellors to understand trauma to assist clients in working with career-related traumatic events, and to know when to refer clients to trauma specialists.

Furthermore, there is a significant body of literature which argues that career counselling and personal counselling are inseparable (Chen, 2001; Hoare et al., 2012; Krieshok, 2009; Krumboltz, 1993; Nevo & Wiseman, 2002; Richman, 1993; Schultheiss, 2006). It is therefore advisable to determine methods for supporting clients in career counselling when addressing complex psychological issues, which can result from negative career related phenomena. Examples of negative workplace experiences other than bullying can include sudden redundancy, long-term unemployment, working long hours, and managing excessive workloads.

Career counsellors must wear different hats in the career

counselling process; one meeting might involve reviewing a CV or preparing a client for an interview, the next consultation may involve consoling a client who has been made redundant. Career counsellors never know what might come up in the course of their work, and while we cannot be experts in all areas of counselling, it is advisable to stay abreast of the literature on personal counselling theories. Understanding the fundamentals of trauma, including its biological components is also advisable.

Background to Case Study

In September 2021, a client, referred to in this article by the pseudonym Neeta, presented for career counselling. Neeta joined a multi-national company towards the end of 2018 as an individual contributor ; she was working at this company until early 2021 when she resigned with immediate effect. Neeta felt she had made every effort to manage the situation constructively via a series of appeals to senior management and the human resources department. Zapf and Gross (2001) demonstrated from their research that instances of bullying often result in the victim leaving the company. According to Zapf and Gross (2001), the process begins with the victim submitting a constructive complaint to senior management. However, the typical outcome sees the victim of bullying leave the organization due to perceived lack of action

from senior management. This was the case in the case study presented here also.

Career counselling with Neeta commenced in January 2021; Fortunately, she had secured an offer from another company,. However, she was still suffering the effects of bullying from her previous manager. She stated that her self-esteem was greatly diminished and she no longer had any motivation. She also advised that she had “lost faith in humanity to do the right thing” and she had lost the ability to trust other people.

Neeta was now extremely anxious about starting her new job in a matter of weeks. She advised that the new job was perfect for her and represented exactly her interests and passions. However, because of her experience at her previous employer she could not generate any excitement for this new challenge, “I am very nervous; I’m very scared. I don’t know [how] it’s going to be; I’m not even thinking about it. I’m not excited.” Neeta was describing symptoms of arousal and re-experience which are consistent with the findings of Tehrani (2004) on workplace bullying. Tehrani (2004) identified arousal as tenseness in the body, feeling depressed, avoiding people, and mood swings. Re-experience was defined as dreams relating to the bullying, difficulty falling asleep, and waves of negative feelings about the bullying. All these symptoms were described by Neeta in this study and will be discussed further in this article.

Neeta requested career counselling to help her prepare for re-entry into her career journey with this new job which was due to commence in a matter of weeks. She wanted to try and prepare herself mentally and emotionally for this process of reintegration. The goal of the five career consultations were intended to help her do that.

Structure of Case Study and Research Philosophy

Five one-to-one career counselling sessions were conducted with 34-year-old Neeta on a weekly basis starting in February 2021 with each session lasting 60 to 70 minutes. This research strategy represents a qualitative approach as the aim is to explore the feelings, social constructs, and beliefs of the participant being interviewed (Bryman, 2012). To analyse the data, a thematic approach was utilised which involves identifying certain themes or patterns that arise out of the data set (Saunders et al., 2019). . Through the using of coding, the aim is to identify elements of the data that relate to the research question (Braun & Clarke, 2013). Codes can be described as words, sentences, or phrases that capture the essence of why a specific piece of data might be relevant.

The interview approach was unstructured as the objective was to allow Neeta to speak freely regarding her experience of bullying. The aim of the interviews was to provide as much space as

possible to Neeta to facilitate the creation of a narrative regarding her experience. . Throughout this research process, I endeavoured to remain aware of bias which might influence the interview process. Recognizing and monitoring the impact of researcher biases is a crucial step in producing credible qualitative research (Berger, 2013).

Ethical Considerations

Considering the subject matter of this study it is necessary to ensure suitable ethical guidelines are followed. I began by providing Neeta with a description of the research via an initial video discussion. I explained to Neeta that I hoped the five one-to-one consultations would be beneficial to her in helping progress in her career while also contributing useful data for this article. Neeta was advised that her involvement was voluntary, and she was free to withdraw at any time. I provided Neeta with a consent form which outlined the nature of the research which she signed and returned. She was also provided with access to all recordings and was assured the recordings would be kept confidential via secure storage on a laptop protected by a firewall.

Throughout the process of writing up the findings, Neeta was kept abreast of any relevant developments. It is worth reiterating that throughout the duration of our consultations Neeta was also working with a therapist to directly address her trauma. We

agreed that Neeta would advise her therapist and myself if she felt the career counselling process became overwhelming at any point. Neeta advised she felt comfortable with the above arrangements and was content to contribute to this research. I continue to have dialogue with Neeta to keep her updated on any further changes that are being made to this article.

A Neuro-Informed Career-Focused Counselling Case Study

The remainder of this article will discuss the findings of the one-to-one career consultations with Neeta via the lens of neuro-informed career-focused counselling (Luke & Field, 2017). As discussed in the introduction, this article will look at three phenomena relative to career counselling via the lens of neuroscience. The first element is the relevance of relationships: a relationship built on trust creates learning via neuroplasticity; conversely a negative relationship can incur hyperactivation of the stress response which reduces learning. In the case of Neeta, the goal was to attempt to diminish the impact of the bullying she suffered through the creation of a safe and trusting relationship with the author via the career consultation process.

The next section of the discussion will examine the neuroscience of the stress response. It is helpful to discuss the stress response as this is a

physiological phenomenon that ultimately leads to the negative emotions Neeta is experiencing. The final phase of the discussion will test the principle of co-construction of a narrative as a means for diffusing the stress response. By creating a rapport between the author and Neeta, it was hoped that the chronic stress response that Neeta was experiencing would decrease in its severity via the process of narrative construction. Throughout this discussion, Neeta's own words will be provided as examples.

The Neuroscience of Relationships in Career Counselling

A safe and trusting relationship has been recognised as vital to the maintenance of mental, emotional, and physical health (Rogers, 1951). With the creation of new technologies such as functional magnetic resonance imaging and the electroencephalogram we can now study social connection at a biological level. Research indicates that social relationships activate different networks in the brain which in turn activate a cascade of physiological responses elsewhere in the body (Eisenberger & Cole, 2012). In the context of the workplace, an employee subjected to bullying may experience activation of the basic neural alarm system (Eisenberger & Cole, 2012). This alarm system, or stress response, has been shown in neuroscientific studies

to include the amygdala, dorsal anterior cingulate cortex, anterior insula, and the periaqueductal grey (Eisenberger & Cole, 2012). These brain regions appear to activate autonomic and endocrine mechanisms that, when chronic, can cause complications for the employee's health. This research therefore indicates that prolonged bullying is unhealthy. This information alone is worth knowing for career counsellors, as this biological process can be referred to in the context of career counselling.

There are two perspectives to explore regarding relationships with Neeta; first, her relationship with her manager who was the source of the bullying and, second, the importance of the rapport that is built between Neeta and me as her career counsellor. Her line manager played a role in creating a state of chronic hyperarousal; and I hoped to play a role in counteracting her chronic hyperarousal by creating a sense of safety and trust. Neeta described how the bullying by her line manager and the lack of support from human resources felt on a relational level:

“It's like David and Goliath. I'm the David and I have a Goliath giant which is made out of people and they're shooting at me constantly, constantly shooting at me and I'm trying to defend myself. I'm trying to run; I'm trying to do whatever I can.”

Neeta provides a powerful metaphor to describe her psychophysiological reaction to the experience of interacting with her line manager, and the human resource manager who she feels failed to protect her. She stated that she felt a general sense of rejection by the group which caused her to lose respect for herself: “I lost self-respect for myself because I was trying so hard to fit into that group dynamics.” Neeta felt like she was always under fire and constantly needed to find ways to prove herself causing chronic activation of her stress response. Furthermore, in the fourth consultation with Neeta, a discussion regarding her relationship with her father arose. Neeta felt she had to work hard for her father’s approval: “You know the biggest thing that I wanted from my father? I wanted validation. I wanted to have him say, oh, I’m really proud of you. I wanted him to respect me.” Based on Neeta’s statements, it appears that her father and line manager were people in her life who had a significant impact on her psychophysiology. While these relationships often resulted in the activation of Neeta’s stress response, it can be hypothesised that relationships which provide her with a sense of safety, acceptance, and trust should lead to a reduction in the stress response. This may be achieved via a combination of one-to-one consultations with myself in addition to the work she is doing with her therapist, and via a

positive working relationship with her new line manager. Neeta did indicate directly in our one-to-one consultations that she felt a degree of trust towards me “I’m talking to you today; I’m trusting you.” Neeta is also making efforts to foster positive relationships in her personal life as well. She recently took up a hobby which is providing her with further opportunities to develop positive relationships that can also help regulate her nervous system so it returns to homeostasis (Miller et al., 2007).

The Neuroscience of the Stress Response

As shown in the previous section, Neeta’s relationship with her line manager had significant consequences for her from a neuroscientific perspective. Decision making is compromised when under stress (Dickinson et al., 2021). This appears to be caused by decreased activation in certain parts of the brain such as the prefrontal cortex which is partially responsible for working memory, cognitive inhibition, and cognitive flexibility (Shields et al., 2016). Stress occurs when the hypothalamic–pituitary–adrenal (HPA) axis activates the release of cortisol from the adrenal glands in response to a perceived threat (Alon et al., 2020). This biological process puts the mind and body into a heightened state of readiness, the heart starts pumping blood to the muscles, blood vessels constrict in preparation for blood loss from injury, muscles

become tense, and pupils dilate. This physiological process leads to negative feelings such as anxiety.

Typically, workplace stress does not cause full activation of the sympathetic branch of the nervous system, it tends to occur at a lower grade. However, if stress is chronic and/or acute it can lead to long term physical and mental health problems. Cortisol reduces the brain’s capacity for neuroplasticity which adversely impacts our ability to learn new information. Dendrites are branches of the neuron responsible for carrying information from one neuron to another; these degenerate during prolonged periods of cortisol release (Mariotti, 2015). Furthermore, neurons can experience diminished insulation which compromises efficiency, and finally prolonged cortisol release can also lead to the death of neurons (Luke & Field, 2017).

In addition to stress compromising cognitive performance in the present moment, it can also cause a cascade of further biological processes such as inflammation, which is considered a possible precursor to serious illnesses such as cardiovascular dysfunctions, cancers of various forms, and diabetes (Mariotti, 2015). When working with clients experiencing chronic stress, career counsellors can bring to a client’s attention the long-term implications of not taking steps to address stress. It may not necessarily require the client to leave a place of employment or change career.

The client may be able to make a smaller collection of decisions which alleviate stress. This might include working less hours and spending more time engaging in stress reduction strategies such as exercise and mindfulness/ meditation.

Neeta was clearly experiencing this psychophysiological process on an ongoing basis in her work as evidenced in the following extract:

“I remember I would go in the office, and something would happen in the morning and that’s it; my day was gone. So, these people wouldn’t trust me with my expertise. I was not able to give them my hundred percent, I was going to the calls and I was distracted because I was feeling bad and disheartened and I could not give them my hundred percent”

Neeta’s statement indicates that her capacity to focus was compromised as a result of the severe level of stress she was experiencing daily at work. She explains that something would happen in work, and she would be unable to focus properly for the day. Neeta was likely arriving at work already in the stress response in anticipation of interacting with her manager; in this heightened psychophysiological state a small inconvenience was enough to make her situation worse. The stress response was impacting Neeta’s capacity to perform at her job while also creating significant negative emotions. Through our

consultations, Neeta examined the negative impact this stress was having on her. This assisted Neeta in interpreting her decision for leaving the company as the correct decision.

Co-Construction of a Narrative

Cozolino and Sprokay (2006) proposed that negative learning experiences increase stress and decrease the possibility of neuroplasticity; conversely if negative experiences are addressed via the establishment of a narrative, anxiety decreases and neuroplasticity is stimulated (Cozolino & Sprokay, 2006). The use of narrative in career counselling has been discussed previously (Cochran, 1992), and so it is interesting to consider narrative at the intersection of neuroscience and career counselling. Powers and Duys (2020) proposed that narrative guidance counselling is well suited to processing negative experiences as it aims to provide a medium through which a client can make sense of a traumatic experience, while also providing a means for establishing a sense of hope for the future. The narrative framework requires the career counsellor to listen deeply to the client, and to allow time and space for the client to form their story; it was for this reason that the interview philosophy took an unstructured approach. Through narration, the client can potentially bring meaning to their experience (Savickas, 2009 et al.), and produce a story which

can provide hope that they will be able to move into a positive future; the client in effect becomes an author of their story (Powers & Duys, 2020). Although narrative has been addressed in the career literature, a neuroscientific basis for the relevance of narrative has not been presented.

According to Cozolino and Sprokay (2006) negative statements from important people in our life such as parents, teachers, and managers become stored in the nervous system, which when invoked, negatively impact performance. Cozolino and Sprokay (2006) support the arguments of Powers and Duys (2020) and Savickas (2009 et al.) by proposing that processing negative experiences requires the co-construction of a narrative. In the context of career counselling, this involves encouraging the client to describe the scenarios in as much detail as possible and to make a concerted effort to make sense of the situation. For Cozolino and Sprokay (2006) it is the active process of making sense of an experience that creates the conditions for improved self-esteem, “In terms of its role in self-esteem, a learner’s self-narrative becomes a blueprint for action that can turn into a self-fulfilling prophecy” (p. 16). It is important to note that the brain is biased towards learning and remembering negative experiences (Davis, 2002; Vyas & Chattarji, 2004). This indicates that in the context of career counselling, it will take more effort to help clients overcome negative career-

related phenomena versus positive experiences.

With regards to working with Neeta, the five sessions were designed to help Neeta construct a narrative around her experience of bullying. As stated, Neeta spent over two years on the receiving end of bullying by her line manager. From a neuroscientific perspective her psychophysiology had to absorb the treatment meted out by her line manager every day. Neeta's entire sensory apparatus was inundated with data that resulted in a cascade of psychophysiological reactions that can be described as a severe form of the stress response. The goal of neuro-informed career-focused counselling (Luke & Field, 2017) is to attempt to diffuse the stress response by helping Neeta construct a narrative around her experience of bullying. By constructing a narrative, Neeta can make sense of what occurred, which in turn should hypothetically decrease the severity of the stress response.

To further support the process, Cozolino and Sprokay (2006) recommended journaling as a helpful exercise in narrative construction. This exercise was proposed to Neeta as an activity to take up between the weekly one-to-one consultations. In the psychological literature journaling has been shown to be effective in processing negative emotions (Donnelly & Murray, 1991; Kim-Godwin, 2020; Pennebaker & Segal, 1986). Neeta took up this suggestion enthusiastically and it

appeared to be helpful for her:

“And when I started writing, I started with the background and all that. And I didn't realize that it was hitting me and everything was coming back to me, every little movement, everything that happened; like the things that I've not even told to anyone, they're coming back to me from a day-to-day point of view. And I kept writing and I was like, okay, I'm going to keep writing. I got so emotional. At one point I remember I was writing, and I was crying and then I got really angry while writing. And I just kept going. And I got so anxious at that moment because it was like remembering everything. It was like, I was reliving everything. It was difficult. And I wrote between - I couldn't stop after 15 minutes, I wrote for 25 minutes.”

It would appear from this excerpt that Neeta is processing a range of powerful emotions via the act of writing, this would support the findings in the literature (Donnelly & Murray, 1991; Kim-Godwin, 2020; Pennebaker & Segal, 1986). The process of describing and labelling negative experiences appears to reduce the strength of the experience on the brain and nervous system (Lieberman et al. 2007). Throughout the five one-to-one consultations I endeavoured to create space for Neeta to narrate her experience. She was encouraged to examine

her experience in as much depth as possible. Through the consultations and the journaling, it was hoped that Neeta would create a narrative around her experience that would help her make sense of what occurred, and by doing so, her brain and nervous system would gradually come to the realization that the threat had now passed.

Conclusion

This article provides further support for the application of neuro-informed career-focused counselling as introduced by Luke and Field (2017). This was done via the examination of a single study participant who was in the process of recovering from bullying by her line manager. By understanding the neuroscience of relationships, the stress response, and the process of co-constructing a narrative, a career counsellor can visualise themselves as an applied neuroscientist (Cozolina & Sprokay, 2016), who assists their clients in taking action that will lead to changes in the structure of their brains and nervous system. A career counsellor can also use these same theories to explain to the client what occurs on a biological level as they engage in the often-complex process of career path planning. Finally, although neuroscience is an exciting field of study with significant potential in the context of career counselling, it is also important to keep a realistic view of what it can offer. Grant (2015) advised caution when applying

neuroscience to the discipline of coaching which is closely related to career counselling. Grant (2015) stated there is still no neuroscientific model for coaching, and the same holds true for career counselling. I therefore identified and focused on three phenomena (relationships, stress response, and narrative) which have been studied to a reasonable extent in the neuroscientific literature, with the goal of explaining how understanding these phenomena can be leveraged in the context of career counselling.

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