

Changing Player Perceptions of Pain: An Intervention to Facilitate Return to Play in Elite Rugby

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The current case reports the intervention approach adopted while working with a professional rugby union player who was struggling to fully return to training after suffering a back injury that required surgery. The sport psychology consultant adopted a positive-cognitive-humanistic approach to practice. The intervention was focused on restructuring the thoughts and beliefs of the player in relation to the physical sensations experienced that were being reported as pain. Program effectiveness was evaluated through the feedback provided by the client and the reflections of the consulting sport psychologist. Reflections on the intervention program by both parties suggest that a pragmatic approach to changes in physical sensations for athletes postinjury can enhance the speed and ultimately successful nature of rehabilitation, thus allowing for a return to the training process.

Keywords: pain management, perception, injury, cognitive restructuring

Context

At the time of the present case study I was a qualified and registered sport and exercise psychologist based in the United Kingdom. I was a British Psychological Society (BPS) chartered psychologist, a Health and Care Profession's Council (HCPC) registered sport and exercise psychologist (government registration), and a British Association of Sport and Exercise Sciences (BASES) accredited Sport and Exercise Scientist. I would further classify myself as a *pracademic*, identified by McNatt, Glassman and Glassman (2010) as a specific type of individual who sits between the traditional academic and practitioner groups. McNatt and colleagues suggested that these individuals seek to apply theory to resolve real-world problems. That is, this group is seeking to understand the clients' wants and needs, and then uses advanced knowledge and scientific research to provide it. As well as being an active applied consultant, I was also an active researcher at the University of Winchester in the United Kingdom. As a member of this pracademic group, I quite literally have a foot in both the academic and applied practitioner camps. I believe this positioning offers some important advantages to my applied practice, but I am also aware that it can also present challenges in understanding the real-world practitioner context.

Consultancy Philosophy

I would describe myself as a positive, cognitive humanist. Positive in the sense that I firmly believe in the central tenant of positive psychology—to focus on optimal human functioning, aiming to discover and promote the factors that allow individuals and groups/teams to thrive (Seligman & Csikszentmihalyi, 2000). Positive psychology can be described as the scientific study of positive traits and experiences, strengths, and optimal functioning (Duckworth, Steen, & Seligman 2005; Seligman, 2002). Over the last decade strengths-based approaches to consultancy, underpinned by principles of positive psychology, have featured heavily in research across mental health disciplines (Ludlam, Butt, Bawden, Lidsay, & Maynard, 2015).

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I am cognitive because in my practice I seek to influence cognitions and beliefs (Beck, 2005). According to Clark and Beck (2010), cognitive approaches are a problem-oriented approach that helps individuals to modify their maladaptive thoughts, attitudes, beliefs, and information processing biases (e.g., “If it does not feel right, then I’m not able to perform to a high level”). At least three key principles underlie this approach, initially proposed by Dozois and Beck (2011). First, the individual’s cognition is assumed to affect both their emotions and their behaviors. Second, it is assumed that people can learn to monitor and modify much of their cognitive activity. Third, cognitive-focused practitioners assume that by changing the individual’s beliefs, one can achieve desired change in the individual’s behaviors and experiences. In summary, the cornerstone of the cognitive approach is the proposition that people can learn to regard their thoughts as *hypotheses* rather than as facts. By testing the validity of these hypotheses empirically, people can “shift their cognitive appraisals from ones that are unhealthy and maladaptive to ones that are more evidence-based and adaptive” (Dozois & Beck, 2011, p. 30).

Finally, I am humanist because I fundamentally believe that each person is unique and the best insight into the problem, and ultimately the solution is the client (see also Rogers, 2003). This perspective is also consistent with the view that the holistic development of an individual’s potential is the primary concern of humanistic practitioners (Hill, 2001). These three fundamental principles (positive, cognitive, humanist) serve to underpin and inform my interactions with clients and the design of programs of intervention and support.

The Case

I was approached by the Head of Science and Medicine at a professional rugby club which is based in and plays competitively in the United Kingdom. This contact was facilitated by the then consultant sports medicine clinician (doctor) at the club. The doctor and I had previously worked together in a different sport at a professional level, and my services were recommended to the Head of Science and Medicine based upon this pre-existing familiarity with my work and approach.

The client was at the time of the consultation a 23-year-old rugby player, who had been playing professional rugby for 4 years. He had been with his current club for 6 years having also progressed through the ranks from the club’s academy and up into the first team squad. At the start of the previous season, he had by his own admission “been playing his best rugby ever” before suffering a back injury and starting to experience right leg pain. This pain continued to get worse, and specifically he experienced sciatic pain for 2–3 months after the injury. The medical team at the club decided the best course of action was to operate (the diagnosis was a bulging/ruptured disc). The rehabilitation process post-operation took 6 months but the client never felt that he was “right” and did not feel as good as he had before the injury.

In returning to training, the client was apprehensive about whether he could rediscover his previous performance levels. Physiological testing showed that physically he had recovered well but did not feel as fit or as quick. Around 8 weeks before the initial contact with me, the client had been ‘signed off’ training feeling unwell with some leg and arm tingling. He had sporadically started to experience a pins and needles type sensation in his right leg. His mind set at the time was one of “having a problem.” He also cared what others (players, coaches, and support staff) thought and was concerned about being perceived as not pulling his weight for the team. The client was getting stressed about not feeling right, and reported that he wanted to feel “perfect” and “get back to” full health.

Needs Analysis

The main approach adopted in my work, and adopted in this particular case, was the use of interviews and observations. The use of which is highlighted as being a valid approach within the domain of sport and exercise psychology (Fifer, Henschen, Gould, & Ravizza, 2008; Vealey & Garner-Holman, 1998). While some practitioners might view using interviews as time-consuming, I believe them to be an important tool in developing rapport, gaining a holistic understanding of the client, and laying the foundation for a trusting relationship; a position endorsed by many practitioners in the field (e.g., Anderson, 2000; Fifer et al., 2008; Ravizza, 2002). Interviews help the consultant to conceptualize the issue, a process that Poczwardowski, Sherman, and Henschen (1998) identified as occurring between the assessment and implementation of an intervention program. Exploring the multiple contexts operating in the client’s life has also

been advocated by Whelan, Meyers, and Donovan (1995) as a key aspect of this process. It has also been suggested that consultants who recognize the importance of exploring multiple selves are most likely to convey to their clients that they care about the individual as a person and not just an athlete (Batey & Symes, 2016; Friesen & Orlick, 2010). This has been claimed to have positive implications for the client's commitment and adherence to future intervention work and adds credence to Ravizza's contention that clients have to "know you care before they care what you know" (2002, p. 7).

The Presenting Problem(s)

The client reported continued experiences of pain despite having been deemed fit from a physical therapy perspective. These experiences of pain were having an adverse effect on the client's ability to focus and to perform to the high standards of performance that he set himself before this episode of injury. The client reported the experience of pain in his leg during many physical training tasks while trying to return to full fitness, and this was impacting his mind-set. The experience of pain is not an absolute; it is ultimately a very subjective experience based on a complex interaction of a number of factors.

Pain can be defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage" (International Association for the Study of Pain, 2002). This definition highlights the importance of both the sensory experience of pain and the emotional response associated with the sensory pain phenomena. Pain then is a product of sensory processes, individual interpretations of what pain means, emotions in response to this interpretation, reactive coping behaviors, and the social influences that shape the subsequent expressions of pain (O'Connor, Heil, Harmer, & Zimmerman, 2005). In sport, pain cannot just be understood in mechanical terms. It is more than just the neural impulses resulting from tissue damage. Pain in sport is also connected to will-power, passion, and achievement (Roessler, 2006). Some sports include pain as part of the sporting experience, and as a result the sports performer's relationship with pain is a complex one. This is particularly true in a contact sport such as rugby where pain is an ever present factor in both preparation and performance. As a result, it is the severity and impact of pain that become the key variables in understanding the impact of pain on the individual.

In terms of the interpretation of pain, Addison, Kremer, and Bell (1998) suggested a continuum of pain experienced by sports performers which highlighted six specific levels: fatigue and discomfort; positive training pain; negative training pain; negative warning pain; negative acute pain; and numbness. Similar to this continuum, Taylor and Taylor (1998) highlighted differences in performance pain, injury pain, acute pain, chronic pain, benign pain, and harmful pain. Performance pain is controlled by the performer whereas injury pain is not controlled by the performer and occurs as a result of an injury. Acute pain is caused by a trauma to the body, which is intense but of a short duration. Chronic pain is long-lasting, uncontrollable pain that continues long after the initial injury. Benign pain is short in duration and not associated with swelling or soreness. Harmful pain occurs before and after exertion, and is associated with swelling, tenderness, and prolonged soreness. However, it is important to re-emphasize that pain is a subjective experience, based upon the interpretation of the individual. Pain tolerance is a personality characteristic that has an important impact upon cognitive appraisal, emotional response, and adherence to rehabilitation (Cox, 2002).

A concept that is related, but different from the experience of pain is that of physical sensations or feeling. This is an important, but not a particularly prevalent issue in the sport and exercise psychology literature. Often sports performers will return from injury expecting to get back to their previous performance, as well as their previous physical and emotional states. While the performer can successfully recover, there is often a different state of normality that needs to be understood and accepted. Often being healthy for these individuals will literally feel different. This "feeling different" can be characterized by different physical sensations that must be accepted if successful reintegration into the performance domain is going to take place (Gallagher & Gardner, 2007). In my experience, there can often be a misclassification of different physical sensations, with some wrongly being characterized as pain. This interpretation in turn can lead the client to believe they are not healthy, where the reality is that the sensations they are experiencing are just a product of the new physical reality that exists for them within the sports performance context. The choice for the performer at this point is often a stark one: Either accept the new reality and the sensations involved, or do not accept them, which can result in an unsuccessful conclusion to the rehabilitation process.

Intervention

For the client in this case, the intervention focused on the use of *cognitive restructuring*, a technique borrowed from cognitive therapy that helps individuals to alter their perceptions of their experiences and sensations (see Clark, 2014). The aim of the intervention was to seek to modify the perception and interpretation of physical sensations associated with the new normal and for the client to accept their new reality and how it related to professional sport.

In terms of the approach adopted, it is common for practitioners to take concepts/models from theory and adapt these so they are locally applicable for the client or context they are working with, because practitioners often outpace research with their applied methods (Biswas-Diener et al., 2011). Similarly, in sport psychology, it is evident that practitioners are conducting novel interventions that may be informed by existing principles from the literature, but adapted for the specific clients they are working with (i.e., Gordon & Gucciardi, 2011). Association strategies were adopted in the current case to heighten body awareness, cultivate a sense of detachment, and increase the athlete's perception of control over the interpretation of the experienced physical sensations. This approach is similar to that often adopted in coping with chronic pain (Taylor & Taylor, 1998).

The intervention (postinitial consultation and needs analysis) took place over a 7-week period. In this time, there were four sessions between the sport psychologist and the client. The first of these sessions was designed to introduce the intervention and to clarify the procedure and what was required. Each of the subsequent sessions was designed to assess progress and to discuss the data that had been collected by the client in the time since the previous meeting.

As a fundamental part of this intervention, the client was asked to keep a performance diary. The diary required the client to record specific data, reflections, and interpretations on a daily basis. In discussion with the client it was agreed that a paper and pen (diary) approach was preferred compared with some of the digital alternatives. On a daily basis, the client was required to note down specific goals/targets for that day. Then on a 10-point Likert scale the client was asked to rate their perceived level of physical sensation, the experience of pain, and their perception of their performance on that day (against the goals/targets they had set). These three measures were specifically selected, along with the goals/targets for a number of reasons: (1), to ensure that the client was being realistic in terms of the targets they were setting and their expectations of performance on that day and (2) to enhance the client's understanding of the physical sensations and pain experienced. An initial part of the intervention involved discussing in detail what pain and physical sensations were (in the context of this sport and the intervention). Another reason these three measures were chosen was to hopefully demonstrate over time that performance was not dependent on low scores for physical sensations or that intense sensations should be automatically perceived as pain. The client was also asked to reflect at the end of each day, by writing down three positives. These reflective points could be related to the sport or the rehabilitation process, but did not have to be. This approach built upon Seligman, Steen, Park, and Peterson's (2005) "three good things" exercise. There is growing evidence supporting the effectiveness of this type of positive psychology intervention for reducing depressed and negative affect as well as enhancing positive affect (Cohn & Fredrickson, 2010).

Reflections

Models of Reflection

Anderson, Knowles, and Gilbourne. (2004) suggested that self-reflection in applied practice should be an attitude as opposed to a collection of techniques. This reflection can take place through written reflections, journal writing, and conversations. In addition, strengthening this process alignment with some predetermined criteria is advantageous. The current case adopted Johns's (1994) model of reflection. This model is based on five cue stages that enable you to break down your experience and reflect on the process and outcomes:

1. Describe the experience and what were the significant factors?
2. What was the goal and what were the consequences?
3. What things like internal/external/knowledge affected my decision making?
4. What other choices did I have and what were those consequences?
5. What will change because of this experience and how did I feel about the experience?

Describe the experience and what were the significant factors? The effectiveness of the proposed plan of intervention was predominantly assessed by the ongoing monitoring of the client's perceptions of the interventions success and perceived level of performance and pain. This is similar to the approach advocated by Batey and Symes (2016). Following each meeting with the client, specific details of the session and my own personal reflections were recorded, and actions were outlined. In between face-to-face meetings, the client and I also kept in contact via Skype and text message to ensure that he was on track regarding the program of intervention.

The intervention applied in this case built on the existing literature on cognitive restructuring (Clark, 2014) and more broadly on associative approaches to pain management (Taylor & Taylor, 1998). However, while the use of cognitive restructuring is well reported, its role in promoting the acceptance of a different physical reality is less well reported in the literature. For many sports performers, there is a choice regarding whether to continue and accept this new reality or to withdraw from the sport. While this choice still exists in professional sport, it is a much less straightforward decision to make due to the sport/professional club also acting as employer. In terms of adopting novel approaches, practitioners can conduct interventions, based on a strong theoretical rationale and the use of appropriate supporting data (Ludlam et al., 2015). Applied practitioners in the field have also been suggested as an untapped resource for the application of innovative interventions (Biswas-Diener et al., 2011) that are ahead of the existing literature.

Over time the client reported a decrease in overall sensation scores. This I believe reflected his resetting of what he perceived normal to be. Performance scores also increased over time (references against the goals/targets set), this was also achieved against an increasing difficulty to the targets set. Crucially, over the period of the intervention, performance scores and sensation scores varied independently. This reinforced the view that the client did not need to *feel* a certain way to perform well. This was important for the client as breaking this association enhanced his feeling of control over potential performance outcomes compared with the case before the intervention.

A big success in this intervention was the client's willingness to engage in the process. The approach only really worked because the client took ownership of the intervention and on a daily basis completed the training log and reflected on how the day had gone. This was crucial to the success of the intervention. Also, the client was happy for the ongoing evaluation and discussion of the intervention to be transferred to the Head of Science and Medicine from the sport psychology consultant. This was also important as it provided the longevity to the intervention that would not have been possible working as a part-time consultant.

What was the goal and what were the consequences? I was looking to increase the client's awareness of his new reality relating to his experience of rugby. Linked to this, I was ultimately seeking to facilitate the client's acceptance of his new physical reality (physical sensations) and to be able to accept this as the new norm. The next step focused on the client becoming desensitized to these sensations to a point where he was not consciously aware of them. In addition, as part of this process, I was looking to break the strong association he had between feeling and performance—that he had to feel fine and ready to be able to perform. This intervention actually went very well, but I was conscious throughout the process that there was the potential for this approach to backfire. In my discussions with the client, we talked very honestly about the alternative to not accepting this new reality—which would have been to cease playing professional rugby at that level. By setting this up clearly as a choice that the client had—i.e., to come to terms with how it now felt to play rugby or to stop playing rugby—I had to also be prepared for the outcome that the client might opt to cease playing the sport. If this had been the outcome, while helping the client I am sure, it would have also damaged the way I was perceived by the professional rugby club.

What things like internal/external/knowledge affected my decision-making? As outlined at the start, I view myself as being generally guided by a positive-cognitive-humanistic approach. As you can see by the interventions adopted, this perception of my own approach very much influenced my decision-making in terms of my work with the client. This understanding of my approach to practice also influenced my initial discussions with the Head of Science and Medicine regarding the service I could provide. The other factor that influenced my decision-making was related to geography. While I had been sought out to provide a consultancy service to the professional rugby club, I was not based geographically close to the club or the client. While technological advances in recent years have had a positive impact upon applied practice and service provision (see Cotterill & Symes, 2014 for a review), often there is no substitute for

face-to-face contact. This meant that the intervention needed to be carefully planned (including the associated travel) and further underlined the need to include relevant Science and Medicine staff at the appropriate time.

What other choices did I have and what were those consequences? The geographical question in particular could have been answered differently. Indeed, I have developed a reasonably consistent approach to my consultancy where I choose to refer potential clients on to another consultant if I deem the distance to be too great for effective consultancy to take place. In the current case, this is something that I did consider, but on reviewing the options available I did not feel there was anyone in the local area that I would recommend as a suitable replacement for the service I would provide. I also felt a degree of obligation due to the recommendation coming from an existing contact.

What will change because of this experience and how did I feel about the experience? Overall, I enjoyed the experience of planning and delivering this intervention. As a specific intervention, it was not something I had previously applied. I have experience in implementing cognitive techniques such as cognitive restructuring but not specifically in the way it was used in this intervention. In addition, working with clients to develop an acceptance of a new physical reality was something that was novel to me. As a result, I read extensively both before (following the initial discussion with the team doctor) and after the meeting with the Head of Science and Medicine. The travel aspect of this consultancy was a challenge; while the distance was not that great, the journey time to the rugby club was around 2 ½ hours. This does raise an interesting question about service delivery and whether the consultant or the client should be the one required to travel. For some subsequent consultancies with other clients from the same club, we have agreed to meet halfway to reduce travel time for both parties.

Lessons Learnt and Future Recommendations

Adherence by the client to any interventions is an important factor in the ultimate success of the intervention. As a result, it should be made clear to the client at the start that the intervention is a collaboration, and the greater their engagement the greater the potential for success. Also engaging the services of other support staff—if appropriate and practical—is important. This is particularly true if you are working on a part-time consultant basis. I also felt that this approach enabled the client to feel they had more ownership of the intervention through the completion of the diary and being the one in control of the data and its communication.

This case has also further reinforced to me the importance of impression management in terms of how others perceive you and your work. It has continued to be the case throughout my 15-year career as a consultant that much of my work comes through referral and recommendation. It is important to do a good job, and also important to be seen to do a good job. Part of this process relates to managing initial expectations for all parties and agreeing what success would look like and how it will be measured.

Overall, I felt that the intervention went well. As a result, I will look to use this well-established approach of cognitive restructuring in relation to recovering from injury again in the future. Particularly in helping clients to come to terms with the new reality of their physical self and the nonpainful physical sensations experienced in both practice and competition.

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