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Sportsmen's experience of the impact of massage by somatologists in enhancing aerobic performance

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Abstract

For the purpose of massages before and after sports events, sportsmen are increasingly visiting somatologists working at private somatology clinics instead of other massage therapists. Massage is frequently utilised as a means of enhancing performance. It is known to have both calming and stimulating properties. Subsequently, it will have the potential to improve performance in numerous different circumstances. In the context of sportsmen visiting somatology clinics, it is unclear how men experience the impact of a massage by a therapist in the somatology environment in relation to the enhancement of sport performance. The objectives of this qualitative, exploratory, descriptive and contextual study were to explore and describe the experiences of sportsmen receiving massage therapy in a somatology clinic, and to give recommendations to therapists for providing the treatment, prior to the sportsmen's subsequent competitive events. A purposive sample was selected from sportsmen who visited a somatology clinic, and who had sought to be massaged at least during the fortnight prior to taking part in an individual interview. They were between the ages of 25 and 50 years, and actively participated in aerobic sports; such as boxing, squash, soccer, short and long distance running and rugby. The data were collected by means of eight in-depth, unstructured, individual interviews and written field notes, until saturation of data was achieved. Open coding of data followed. Some participants' experiences of massage at a somatology clinic were positive, and stated that it assisted them to recuperate from fatigue and to reduce recovery time; especially during times of competition; and consequently was enhancing performance during the next event. Other participants were unable to comprehend exactly what was required of them while they were reflecting on their experiences. It was concluded that there was a need for somatologists to participate in the sporting industry, as they would educate sportsmen about the value of massage to the body.

Keywords: Sportsmen, massage, somatologist, experiences, performances.

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Introduction

For hundreds of years, massage has been used around the world for rehabilitation and relaxation purposes (Goats, 1994). Massage is also used to prepare sportsmen for competitions, between competitions and continually to expedite recovery from competition (Salvo, 2009). It has been used in sport and

therapeutic settings to enhance performance and recovery from exercise, and studies have found varying effects (Brooks, Woodruff, Wright & Donatelli, 2005). Massage incorporates a number of positive outcomes. Such outcomes are impacting elements of the massage and include time for care and personal attention, engagement with a competent therapist, forming a trusting relationship, empowerment and relaxation (Smith, Sullivan & Baxtar, 2009). Massage is frequently used either prior to or after a sport performance (Carpentier, 2010). It is important for somatologists (also referred to as therapists) to understand and know how to perform the important components of massage therapy to enhance the well-being and performance of sportsmen (Aldrade & Clifford, 2008).

Massage can provide several benefits to the body, such as increased blood flow, reduced muscle tension and neurological excitability, and an increased sense of well-being (Galloway & Watt, 2004). The possible mechanisms and the effects of massage usually result from authors' speculations based on general biomechanical, physiological or psychological knowledge. More scientific data about the benefits of massage to aerobic sports events and performance are required (Galloway & Watt, 2004). For the purposes of this study, an "aerobic sports event" refers to competitive sports in which men are taking part; such as boxing, squash, soccer, short and long distance running and rugby.

Studies have reported mixed findings about the claims of enhanced sports performance and the recovery from injuries by using massage techniques. Robertson, Watt and Galloway (2004) reported significant support for massage as a technique for lowering the fatigue index while Zainuddin, Newton, Sacco and Nosaka (2005) found that massage was effective for reducing serum creatine kinase levels. Weerapong, Hume and Hume (2005) had delineated the types of massage and their purported mechanisms and benefits to athletes. These authors concluded that there was no clear evidence that massage could actually improve performance, enhance recovery, or prevent muscular injury. Leivadi, Hernandez-Riefand Field (1999) concluded that there were limited empirical data about the outcomes of massage therapy. Goodwin (2009) suggested that despite frequent anecdotal claims, research into the effects of massage on subsequent sport performance was inadequate. Most of these studies had used quantitative methods.

There was a lack of empirical evidence with regard to the experiences of sportsmen and the impact of massage by somatologists for the enhancement of aerobic sports performance. While evidence to support the benefits of massage on sports performance was not widely available, new trends indicated that there was an interest in understanding massage better (Schwellnus, 2008). There was an increase in the number of athletes who were visiting somatology clinics for massages prior to or after participating in an aerobic sports event (Gould, 2004).

In the context of sportsmen visiting somatology clinics, it was unclear how they experienced the impact of a massage by a therapist in the somatology environment as far as the improvement of aerobic performances was concerned.

This article reports on a study that was designed to explore and describe the experiences of sportsmen about the impact of receiving a massage, performed by a somatologist, to enhance performance. In this study, "clinic" refers to a private facility, devoted to the diagnosis and care of outpatients (Holey & Cook, 2003).

Methods

Participants

The study sample consisted of sportsmen who were receiving massage therapy at a somatology clinic in the Johannesburg, South Africa. The qualitative researcher intentionally selected individuals and sites instead of selecting them randomly (Plano, Clark & Creswell, 2010). Purposeful sampling was used in this study to select participants that had experienced the phenomenon being studied (Neuman, 2006; Maree, 2007; Creswell, 2007); namely receiving a massage and taking part in aerobic sports events. The sampling criteria included sportsmen between the ages of 25 and 50 years, who had received at least two massages prior to the study. Participants were involved in aerobic sports; such as boxing, squash, soccer, short and long distance running and rugby. The sample included four black, two coloured and two white participants.

Research design

A *qualitative, exploratory, descriptive and contextual* approach was utilised in this study to gain insight into and an understanding of the experiences of sportsmen receiving massage therapy at a somatology clinic. The process of this qualitative study involved posing emerging questions during an inductive process, collecting data that were typical of the participants' setting, analysing data which were inductively developed from particular to general themes, and concluding interpretations as far as the meaning of the data was concerned (Creswell, 2009).

Data collection procedure

In-depth, unstructured, individual interviews were conducted during August 2010, and were deemed to be useful as an approach to understanding human experiences. In-depth, unstructured, interviews allowed the interviewer to access the deeper meaning of the participants' responses about massage (Burns & Grove, 2005). Field notes were used to collect data during interviews, as a means of the triangulation of data. Field notes enabled the researcher to record the

observations that were gained during the interviews (De Vos, Strydom, Fouché & Delport, 2005). One pilot interview with a single participant, who met the inclusion criteria, was first conducted.

The central open-ended question was posed to all the participants: "How do you as a sportsman experience the impact of a massage by a somatologist at a private somatology clinic for enhancing your performance?" In order to gain a clear view of the research phenomenon, the question was followed by minimal verbal response, paraphrasing, clarification, probing and summarising (Burns & Grove, 2005). The meaning of participants' responses could also be clarified immediately and, as a result, it offered the opportunity to attain highly personalised data (Flick, 2009). Bracketing was a process which allowed the researcher to reflect on her own views in relation to the central phenomenon (Plano, Clark & Creswell, 2010). Furthermore, the researcher tried to build rapport in order for the participants to reveal information about their experiences; by ensuring that they were comfortable at all times (Neuman, 2006).

Data analysis

Data analysis was a continuous process that occurred simultaneously with data gathering until data saturation, i.e. the new information obtained did not provide further insight into the research phenomenon (Creswell, 2007). Audio recorded interviews were transcribed verbatim by an independent professional researcher, and it included a translation process. To ensure the confidentiality of the respondents, the researcher removed identifiers; such as names or specific locations before these transcripts were used (Green & Thorogood, 2009).

Data were analysed, using Tesch's descriptive method (Creswell, 2004). The researcher obtained a comprehensive sense of the phenomenon, selected one interview and asked: *"What is this about?"* A list of all the topics was compiled, and similar topics were clustered together. The topics were abbreviated to codes, and these codes were written next to the appropriate segments of the text. A preliminary organising scheme was designed, and topics turned into categories. A final decision was made about the abbreviation for each category and the codes were listed alphabetically. The data in each category were grouped together, and a preliminary analysis was performed. Raw data, transcribed audio recordings of the interviews, field notes and the protocol for data analysis were given to an independent co-coder, who was an experienced qualitative researcher. A consensus meeting was held afterwards by the researcher and the independent co-coder (Green & Thorogood, 2009).

Trustworthiness

In this study, *credibility* was facilitated in a number of ways, namely prolonged engagement in the field, triangulation of data, and authority of the researcher. "Reflection" referred to the assessment of the influences of the researcher's own background, perceptions, and interests in the qualitative research process (Collins, Onwuegbuzie & Jiao, 2010). The concept of *dependability* was ensured by the co-coding procedure, during which an independent co-coder recoded the findings during the data analysis phase. Researcher reflexivity was ensured by means of bracketing (De Vos *et al*., 2005). In relation to *transferability*, this study ensured a complete dense description of the method of conducting the interviews.

Ethical considerations

The participants had a right to privacy, which implied that each participant had a right to decide when, where, to whom and to what extent the data could be revealed (Singleton, Straits, Straits & McAllister, 1988). "Informed consent" involved a process during which the researcher provided participants with clear, detailed, and factual information about the study; its methods; its risks and its benefits; the assurance of the voluntary nature of participation; and the freedom to decline participation or to withdraw from the study without any penalties (Blanche, Durrheim & Painter, 2006). In this study, emotional harm was not foreseen, since the participants were not seen as a vulnerable group (De Vos *et al.*, 2005).

Results

All the participants were men who were taking part in aerobic sport; such as soccer, boxing, short and long distance running and rugby. The participants were aged between 25 and 50 years with a average age of 30. There were 4 black, 2 coloured and 2 white participants who took part in this study.

The findings of this study suggested that in general there seemed to be *ambiguous realities about the influence of massage on aerobic performance*. After screening the data, it was clear that the realities about massage and its influence on the actual aerobic performance emerged as uncertain. The data indicated that the participants did not necessarily experience an increase in their performance. There seemed to be two opposing views about the influence of massage on aerobic sports performance. Some of the participants believed that massage increased their aerobic sports performance, whereas others felt that massage did not necessarily enhance aerobic sports performance. The following themes emerged from the study:

Theme 1: Massage increased aerobic sports performance

For some of the participants in this study, massage seemed to have led to an increase in the level of performance. It was stated: *"Like I said, your performance improves, it did help the improvement of muscles, and not get stiff… if you don't get a massage then you're going to be stiff and all that…"*. McGillicuddy (2011) stated that optimal performance and quick relief were readily available with pre- and post-sport events massages. Three categories of opinion were experessed on this theme:

In Category 1, participants mentioned the mental (psychological) benefits of the **massage for performance.** It seemed that the massage contributed to being more focussed during performances, like one participant stated it: *"being calm"*; in "*a healthy state of mind"*; and "*tend to be more focussed, so that it improves your performance"*. A participant emphasised that his confidence improved after the massage by stating: *"I feel more confident to go into a match"; and "I don't have to worry too much about being injured"*. Another participant stated: *"a very relaxing thing... maybe it helps you with your stress levels as well"*. It indicated that the massage was a means of relieving stress. The composite psychological benefit of the massage for performance was outlined by a participant who specifically stated: *"I only know… I am sure some of my colleagues and some of the people I play with, they've been mentally helped through the process."*

Carpentier (2010) confirmed that sportsmen would benefit from massage (even before the sports event), since it provided mental benefits as far as easing anxiety and promoting relaxation were concerned. Massage was used to minimise negative performance factors; such as anxiety (Drust Atkinson & Gregson, 2003).

Participants in Category 2 indicated that they used **massages for physical benefits** during performances. It was confirmed by a participant who stated: *"The long term has more physical benefits"*. The highlighted benefits were that flexibility was enhanced during performance since a participant stated: *"I find that my flexibility is much better."* Another benefit was mentioned with regard to the ability to play more: *"And as you recover faster you can play more."* Massage was considered to enhance muscle relaxation (Sinha, 2001), to promote the healing process, and consequently, to improve athletic performance (Rinder & Sutherland, 1995).

Category 3 illustrated the use of massage to **minimise negative performance** factors, such as dysfunctional muscle and connective tissue, restricted range of motion, pain and anxiety. Physical benefits were pointed out by a 50-year old long distance runner: *"I can sort of perform better"*. Some athletes stated that

they experienced less pain during performances. They mentioned: *"Because I don't have that pain anymore"; "I think the massage kind of loosened me up for the game"; "Legs were not as stiff";* and *"because I think of the possible effects of the massage is better blood flow"*. One participant indicated that massage had been increasing his sports performance by stating: *"I perform better"*. Massage might help to optimise positive performance factors; such as healthy muscle, connective tissues and normal range of motion (Anonymous, 2004). Preventative massage was commonly recommended to decrease injury potential factors (Drust *et al.,* 2003).

Theme 2: Massage did not necessarily enhance aerobic sports performance

Data from this study also indicated that massage did not necessarily increase aerobic sports performance. A participant stated: *"There wouldn't be anything that would stop me from performing what… what I did before"*. Another participant noted reduced levels of anxiety prior to their performance, but did not report any increase in the actual performance levels. One participant was hesitant in commenting: *"Well, I won't say… I won't say even better but my performance would be exactly the same as what it was"*. These findings support the literature that stated that there had been no intervention studies to assess the effects of massage on sport performance or injury prevention strategies (Drust *et al.*, 2003).

Another category emerged since some of the participants stated their uncertainty about the sustainable benefits of a massage: *"Not that you perform better"* and *"Ja, the muscles cool down again and you just lost the benefits."* There was no clear evidence that massage could actually improve performance (Drust *et al.*, 2003).

Discussion

Not all the participants experienced an impact on their aerobic performances after massage therapy. This result should also be viewed in the context of somatologists who were not trained in sport massages, since they were perceived to focus on aesthetics. The fact that not all participants experienced an impact on their performances could also be due to different factors; other than the massage on its own; that might have played a role in increasing aerobic performance; such as fitness levels of the participants and psychological preparation. The growing awareness and use of sports massage therapy, as a valuable addition to other manual therapies and treatments, had become a key component of high performance (Anonymous, 2004). However, it was difficult to explain how massage was reducing and aided in the recovery of injured muscles (Zainuddin *et al.,* 2005). From the results of the present study, it could be concluded that some of the greatest advantages of massage for the participants were to

overcome fatigue, to reduce recovery time, feeling confident and less pain; especially during times of competition; and consequently enhanced performance during subsequent events.

As somatologists were not specifically trained in sports science, and in the context of more sportsmen who were visiting private somatology clinics, they should have sufficient knowledge about a variety of aerobic sports to assist in increasing the men's sports performances. Their knowledge of sports science could further enhance the performance of sportsmen. The career of a somatologist should encompass more skills than just aesthetics (Venter, 2012). They should, therefore, be informed about the different sports during training (Eliakim *et al.*, 2011).

After training, they could conduct research and read about the different aerobic sports to broaden their knowledge and to ensure that they were and remained competent. It would be important to ensure that treatment specifically addressed the muscle groups for the particular aerobic sports the client might be engaging in, and to be certain that the therapists were capable of adjusting the treatment accordingly. They should always emphasise the objectives of massage to the clients, and clearly should indicate to them that massage on its own could not necessarily improve aerobic performance. The positive effects of massage usually resulted from authors' speculations based on general biomechanical, physiological or psychological knowledge (Galloway, Watt & Sharp, 2004). Therefore, somatologists should advise clients about the importance of training for their aerobic sports events rather than relying solely on massage. More scientific data on the holistic benefits of massage were required (Galloway, Watt & Sharp, 2004).

The findings indicated that the therapist should focus on massage that could positively impact aerobic sports performance. Furthermore, the findings of this research indicated that massage did not necessarily enhance aerobic sports performance, and the participants noted that they had no way of knowing whether the massage was helping to enhance their aerobic sports performance or not. Certain actions by the therapists could assist in this regard. They should monitor the performance of the men with and without the massage treatment; using an experimental design, since it could help indicating whether massage was performance enhancing or not. It could help to highlight areas requiring improvement as far as massage was concerned, and as a result, could ensure that those areas were addressed in order to utilise massage to enhance aerobic sports performance.

A limitation of the study was that, in spite of the men meeting the selection criteria, they were often not able to express themselves very well verbally. In some cases the men were unable to comprehend exactly what they needed to say

about their experiences. A critical limitation of the study relates to the small sample size which constrains the external validity of the study, i.e. its ability to generalise the findings is greatly limited. However, a sample size of this nature is not uncommon in medical and allied research.

Conclusion

This study had indicated that there was a demand for somatologists in massage therapy to participate in the sporting industry, and the need to educate sportsmen about massage and its benefits for the body. It was evident from the positive experiences shared by sportsmen in relation to the positive impact of massage prior to a sports event. The study had also shown that there was a need for further research about sports massage by somatologists and its impact on the body and performance during sports events. Participants' experiences of massage at a somatology clinic were positive, while a few of them could not mention the impact it had on their performance during a sports event. Men receiving massage therapy at a somatology clinic was a growing phenomenon that required further and more intensive research in this field, since it was very limited and scarce in South Africa.

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