

# Knowledge and Perception of Athletes on Sport Massage Therapy (SMT)

Mignon Schilz, BA (Hons), Lloyd Leach, PhD

*Department of Sport Recreation and Exercise Science, Faculty of Community and Health Sciences, University of the Western Cape (UWC), Bellville, South Africa*

**Background:** Interest in sport massage is steadily increasing in recent times especially in developing countries. One study showed that general practitioners had minimal or no knowledge about sport massage therapy (SMT). Coaches, athletes, and sports medicine personnel have various beliefs about the benefits and efficacy of SMT. It would be prudent, therefore, for athletes who are frequent users of SMT to possess adequate knowledge and appropriate attitudes about SMT.

**Purpose:** The purpose of this study was to determine the knowledge and perceptions of athletes about SMT.

**Setting:** The study setting was located in the City of Cape Town, Western Cape Province, South Africa.

**Research Design:** A quantitative, cross-sectional and descriptive study design was used.

**Participants:** The study sample consisted of 100 conveniently sampled athletes, males and females aged 18 years and older, from various mountain biking and trail running events in the City of Cape Town.

**Methods:** A researcher-generated and self-administered demographic questionnaire was distributed amongst the participants either as a hardcopy or completed online via Google forms. The knowledge and perception questionnaire consisted of 10 knowledge and 17 perception questions, and was based on previously validated questionnaires. The data were analyzed descriptively using frequencies (percentages).

**Results:** The results of the study indicated that the participants had a moderate-to-high knowledge of SMT and that they had positive perceptions overall about SMT.

**Conclusion:** This study indicated that athletes who made use of SMT were quite knowledgeable about SMT and that they were well-disposed towards SMT as a

beneficial modality for sport performance and postexercise recovery.

**KEYWORDS:** massage; sports medicine; therapy; developing countries; athletes; biking; running; cross-sectional South Africa

## INTRODUCTION

Sport massage therapy (SMT) plays a valuable role in the health-care system.<sup>(1)</sup> The sport massage therapist helps with health promotion, possible disease prevention, and rehabilitation, as well as palliation.<sup>(1)</sup> SMT is seen as one of the most frequently used techniques to help assist in recovery after an intense training session.<sup>(2)</sup> A study showed that, of the 54% respondent physicians who completed a questionnaire, 68% indicated that they had minimal or no knowledge about SMT.<sup>(3)</sup> Yet, the majority of physicians reported that SMT had positive results, qualities, and outcomes.<sup>(3)</sup> Coaches, athletes, and sports medicine personnel have different beliefs about the benefits of SMT based on their individual observations and experiences.<sup>(4)</sup> SMT has various effects on the body—for example, reduced muscle tension and increased blood flow, as well as enhanced psychological effects.<sup>(3)</sup>

It is important to know, from the athlete's perspective, what they understand about SMT and how they perceive the modality. Dinsdale stated that SMT is beginning to grow significantly and that there was an increase in athletes' knowledge about SMT, as well as their perceptions.<sup>(5)</sup>

SMT has shown possible benefits such as helping to prolong an athletes' sports career and lifespan, as well as helping to prevent possible injuries among athletes and sportspeople in general.<sup>(6)</sup> Athletes with disabilities stated that SMT relieved

the tension in their muscles.<sup>(6)</sup> SMT is also seen as having a positive influence on sport performance.<sup>(6)</sup>

## METHODS

### Research Design and Setting

A quantitative, cross-sectional design was used in the study that took place in the Cape Peninsula region of the Western Province, South Africa.

### Participants

The study consisted of 100 conveniently sampled athletes, males and females, ranging in age from 18 to 79 years, and who had previously received one or more sessions of SMT. The participants were recruited at various trail running and mountain biking events around the City of Cape Town, South Africa. After receiving permission from the events organizing committee, the researcher approached the participants in person and verbally requested them to participate in the study.

### Study Delimitations

The inclusion criteria for participants in study were that they had to be over the age of 18 years and had to have previously received at least one session of SMT. Athletes were excluded if they were 18 years or younger and had never received SMT before.

### Methods

A self-administered demographic questionnaire was designed by the researcher and distributed either as a hard copy or online via Google forms at various trail running or mountain biking events in the City of Cape Town. The knowledge and perception questionnaire consisted of 27 questions in total (10 knowledge and 17 perception questions), and was based on previously validated questionnaires<sup>(3,7,8)</sup> (see Appendix A). Internet access was provided free of charge for the participants who chose to participate in the study online.

### Ethical Considerations

Before commencement of the study, ethical approval from the Biomedical Research Ethics Committee (BMREC)

of the University of Western Cape was obtained (Ethics clearance number: BM18/5/11). All participants in the study received information letters and completed the consent form. The participants could withdraw from the study at any time or decline participation without any negative consequences.

### Statistical Analysis

Descriptive statistics were used to analyze the data through the IBM SPSS statistics program (version 25). The results of the study are presented graphically or tabulated and expressed as frequencies (percentages).

## RESULTS

Table 1 shows that more than 70% of participants understood that SMT increased muscle strength within an individual, as well as improved flexibility. More than 90% agreed that SMT increased blood flow within the muscles which, alternatively, led to decreased muscle fatigue.

Figure 1 indicates that 32% of participants felt that the greatest benefit of SMT was to treat injury, pain and/or discomfort. The other benefits of SMT were that it decreased muscle stiffness and increased range of motion (24%), as well as decreased recovery time and increased peripheral blood flow (24%). A minority of participants felt that SMT was useful in reducing muscle cramps (4%), and had psychological benefits (2%). A number of participants responded that the benefits of SMT were multifactorial (14%).

Figure 2 shows the three main SMT techniques: effleurage, petrissage, and

TABLE 1. Participants' Knowledge of Sport Massage Therapy, Expressed as Percentages

Question	Strongly Agree	Disagree	Strongly Disagree	
SMT Increases muscle strength?	20	53	23	4
SMT improves flexibility?	40	50	10	0
SMT helps increase blood flow?	58	42	0	0

tapotement. The results indicated that many participants knew one (44%) or two (44%) of the SMT techniques and 12% knew all three SMT techniques.

Figure 3 shows that the body region chosen most often by participants for SMT was the thighs (56%), the gluteus (43%), the hamstrings (37%), the full back (37%), and the lower back (31%).

Figure 4 shows that 33% of participants responded that a physiotherapist worked with injured athletes only, while 22% responded that a sport massage therapist worked with uninjured athletes only. The majority of participants felt that both the physiotherapist and sport massage

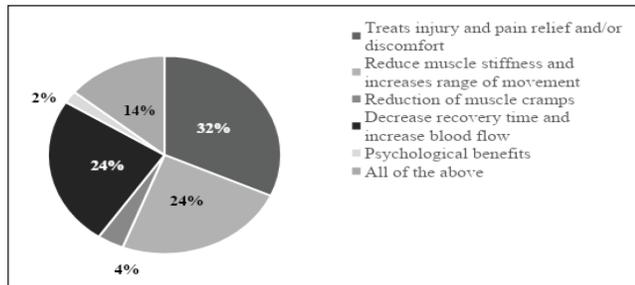


FIGURE 1. Participants' perceptions on the benefits of sport massage therapy, expressed as percentages

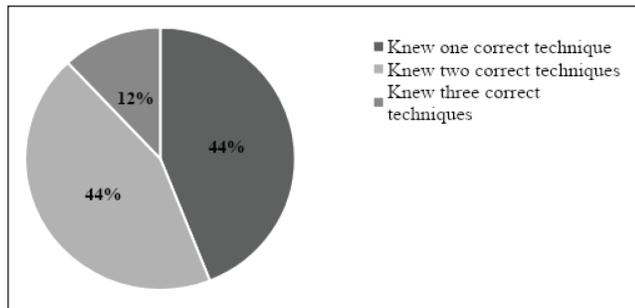


FIGURE 2. Participants' knowledge, based on the three main techniques of sport massage therapy

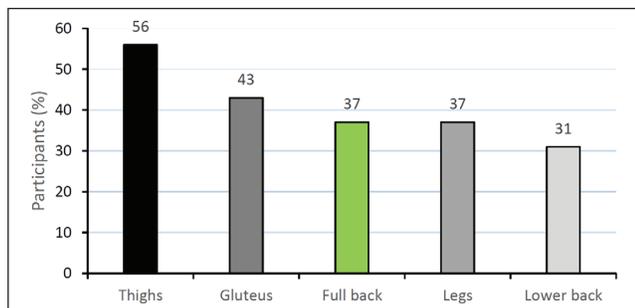


FIGURE 3. Body regions generally massaged when applying sport massage therapy

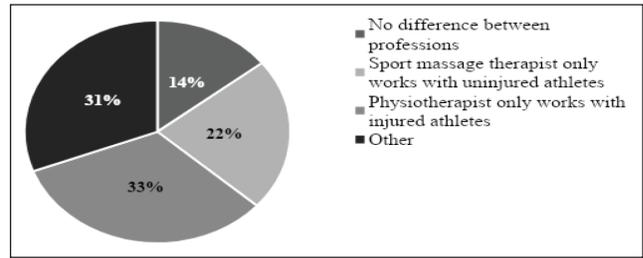


FIGURE 4. Participants' knowledge of the difference between a sport massage therapist and a physiotherapist

therapist did not only work with athletes, but with the general public as well (31%). A number of participants indicated that there was no difference between a physiotherapist and a sport massage therapist (14%).

Table 2 illustrates that 90% of participants had a positive perception about SMT because it improved the quality of life. The majority felt that SMT was a valuable method of resolving a wide variety of muscle problems (92%), and could be seen as a form of injury prevention (93%). Many participants indicated that they found SMT useful (99%) and would recommend SMT to other athletes (99%).

As seen in Table 3, more than 70% of participants agreed that SMT was cost-effective, and that their family and/or friends knew the various benefits of SMT. In addition, more than 90% indicated that they enjoyed receiving SMT and that they felt very relaxed afterwards (87%).

Figure 5 shows that 54% of participants felt relaxed after receiving SMT, whereas 38% felt sore, 29% felt immediately relieved, while 8% felt that SMT had other benefits.

Figure 6 illustrates who should receive SMT. According to the participants, persons most suitable for SMT were athletes and

TABLE 2. Participants' Perceptions of Sport Massage Therapy, Expressed as Percentages

Question	Yes	No
Does SMT improve quality of life?	90	10
Is SMT a valuable method for resolving a wide variety of muscle problems?	92	8
Can SMT be seen as a form of injury prevention?	93	7
Do you find SMT useful?	99	1
Would you recommend SMT for other athletes?	99	1

TABLE 3. Participants' Perceptions of Sport Massage Therapy, Expressed as Percentages

Question	Strongly Agree	Disagree	Strongly Disagree	
SMT is cost-effective?	12	60	26	2
My family/friends know the benefits of SMT?	16	48	36	0
I enjoy receiving SMT?	63	31	5	1
SMT makes me feel relaxed?	39	47	12	2

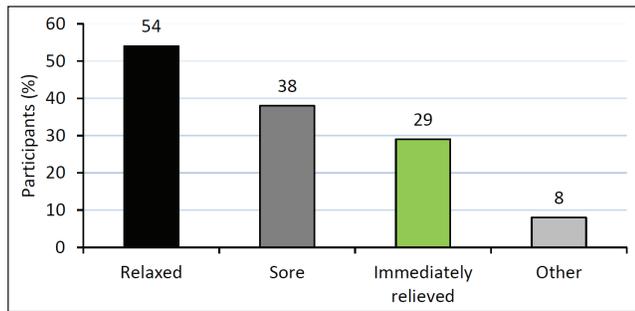


FIGURE 5. Participants' perceptions after receiving sport massage therapy

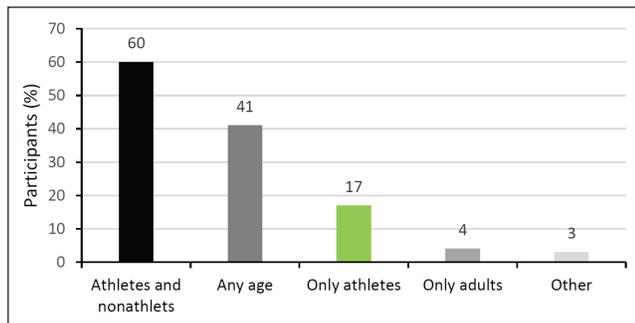


FIGURE 6. Participants' perceptions on who should receive sport massage therapy

nonathletes (60%), individuals of any age (41%), athletes only (17%), adults only (4%), and others (3%) such as individuals with disabilities, pregnant females, etc.

Figure 7 indicates that 35% of participants received SMT most often at sport events. In terms of the frequency of receiving SMT, 28% said that they received SMT on a monthly basis, 5% received SMT weekly, while 32% indicated other, which included less frequent or quarterly treatment.

A total of 84% of participants indicated that SMT increased sport performance, and 1% said that it temporarily increased performance, whereas 15% said that it did not affect sport performance (see Figure 8).

Figure 9 illustrates the participants' attitudes about SMT. The majority (95%) had a positive attitude, while 4% were unsure about the way they felt about SMT, and 1% had a negative attitude about SMT.

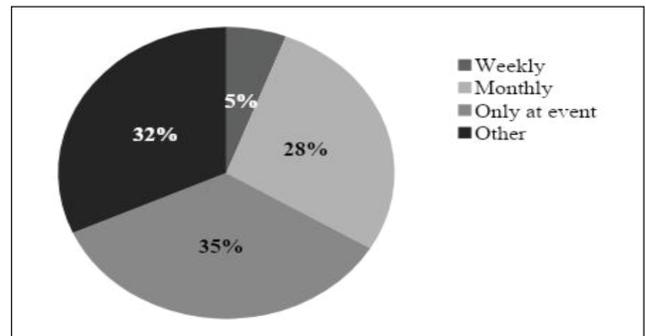


FIGURE 7. Participants' perceptions about how often they received sport massage therapy

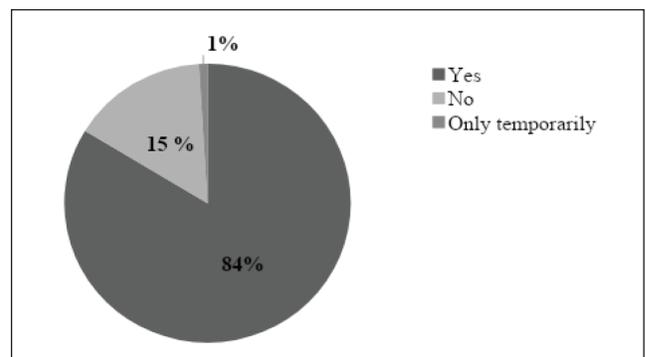


FIGURE 8. Participants' perceptions about whether they experienced an increase in sport performance after sport massage therapy

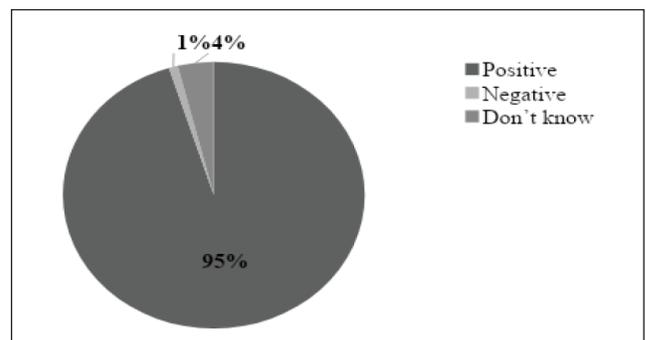


FIGURE 9. Participants' attitudes about sport massage therapy

## DISCUSSION

The participants in the study came from two types of adventure sport events, namely trail running and mountain biking. The participants varied in age from 18 to 79 years. All the participants who participated in the study had received sport massage therapy at least once before completing the questionnaire, and were familiar with the modality.

Muscle fatigue amongst athletes occurs quite often during and after sport training, as well as during and after sport competitions.<sup>(9)</sup> Moraska reported that SMT can be an important treatment of muscle fatigue, due to its ability to influence fluid movement within deep muscle tissue and, thereby, improve nutrient flow, as well as waste removal in order to promote muscle recovery.<sup>(9)</sup> SMT cannot prevent stress fractures from occurring, but can help relieve muscle fatigue and prevent some altered mechanisms, which in return reduces the stress on the bones.<sup>(10)</sup> SMT is widely used by the athletic population, and SMT contains various outcomes, including injury prevention, recovery facilitation, and relaxation, as well as enhancing sport performance.<sup>(11)</sup> Portillo-Soto et al. reported that SMT increased blood flow, as well as peripheral perfusion to the surrounding limbs.<sup>(12)</sup> The present study reported that more than 90% of participants agreed that SMT increased blood flow, which led to decreased muscle fatigue. The participants also indicated that after SMT they felt relaxed, some felt sore, while others felt relieved.

SMT is also widely used by athletes who have physical disabilities.<sup>(6)</sup> As many as 47% of athletes stated that SMT relieved the tension in their muscles.<sup>(6)</sup> Athletes also regarded SMT as having a positive influence on their performance during the competition season.<sup>(13)</sup> Kargarfarid et al. indicated that bodybuilders who received 30 minutes of SMT demonstrated an increased recovery rate that led to an increase in exercise performance.<sup>(14)</sup> Up to 24% of participants in the present study stated that SMT helped reduce muscle stiffness, as well as decrease recovery time.

Many coaches, athletes, and other professionals hold the perception that SMT has several benefits.<sup>(15)</sup> SMT is seen as beneficial for athletes through enhancing their sport performance as well as recovery.<sup>(15)</sup> In the study conducted by Delextrat et al.,

the athletes believed that SMT helped with recovery due to the various physiological, neurological, and other mechanisms that are activated by SMT.<sup>(16)</sup> A variety of studies indicated that SMT can increase range of movement.<sup>(17)</sup> In the present study, 14% of the participants indicated that the benefits of SMT were multifactorial, and included sport performance enhancement, while 32% indicated that SMT was effective in treating injury and relieving pain and/or discomfort. Most of the participants indicated that the body regions that were generally massaged when applying SMT were the thighs and gluteus.

Leivadi et al. did a study on female university dance students who had various neck, shoulder, and back pains.<sup>(18)</sup> After receiving SMT, the students experienced less pain in their shoulders, neck, and back, as well as increased range of motion in neck extension and shoulder abduction. A review of SMT for low-back pain indicated that SMT had significant benefits on non-specific back pain.<sup>(19)</sup>

Another study was done on how SMT affected sufferers of low-back pain.<sup>(11)</sup> The participants in the massage therapy group experienced significant improvement in the function of their lower back, as well as less intense pain.<sup>(11)</sup> This study concluded that SMT was beneficial for those with sub-acute and chronic low-back pain.<sup>(11)</sup> SMT is the most preferred complementary and alternative medicine treatment for any chronic nonspecific back pain.<sup>(20)</sup> In the present study, 31% of participants indicated that they received SMT for low-back pain relief.

SMT had a positive effect on the recovery of athletes during their rehabilitation.<sup>(21)</sup> SMT, as a recovery modality, has increased rapidly world-wide, and especially amongst rugby players in New Zealand.<sup>(21)</sup> The rugby players stated that SMT helped prolong their rugby careers by preventing injuries. The SMT was also seen as a form of recovery and relaxation.<sup>(21)</sup> More than 90% of participants in the present study felt that SMT was a valuable method of resolving muscle problems, and was seen as part of injury prevention. The overwhelming majority indicated that SMT was indeed useful, and that they would recommend SMT to other athletes.

Nonprofessional athletes, as well as their trainers, are increasingly intrigued about the role of SMT.<sup>(8)</sup> There are many perceptions held about the effectiveness of SMT, such as it can help prevent injury

and increase sport performance.<sup>(8)</sup> The perceptions of nonprofessional athletes have become more positive, due to reports from professional athletes stating that their performances improved when undergoing SMT.<sup>(22)</sup>

Studies by Hemmings et al. reported that athletes' perceptions of SMT changed after receiving SMT as a recovery modality.<sup>(13,23)</sup> Kaada and Torsteinbo reported that during SMT, there was a 16% increase in plasma endorphins, which helped explain the feeling of well-being experienced after SMT.<sup>(24)</sup> Cieřlik et al. reported that the postural stability in young women increased after a single SMT session.<sup>(25)</sup> In the present study, the overall perception of SMT was positive, and the participants felt that SMT improved quality of life. A few (4%) of the athletes were unsure about SMT, and 1% felt negative about SMT.

Jooste and colleagues reported that male athletes were more inclined than female athletes to go for SMT before and after big sporting events.<sup>(22)</sup> The participants in the present study indicated that both athletes and nonathletes could benefit from SMT, as well as persons of all ages. Also, 35% of the participants indicated that they received SMT at sports events, while 28% received SMT monthly and only a few received SMT weekly (5%).

### Limitations of the Study

The study did not use random sampling of participants, which limits the external validity of the findings. The limited demographic information describing the subject population that does not include the fitness levels of the participants or whether they were social or competitive athletes constitutes an additional limitation of the study. Also, a researcher-generated questionnaire was used in the study that was based on previously validated questionnaires. Because the participants in the study were required to have previously received one or more sessions of SMT, this may have introduced some risk of bias by only sampling participants who used SMT and who may have been positively predisposed to SMT.

### CONCLUSION

Even though the study was deficient in quantifying the participants' knowledge

about SMT, it nevertheless indicated that the participants had overwhelmingly positive perceptions and attitudes about SMT and its usefulness in addressing a wide variety of muscular problems. The majority of athletes in the study responded that they enjoyed receiving SMT and felt relaxed afterwards. SMT has the potential to be beneficial for athletes across a variety of sports. However, its effectiveness is still quite controversial and needs further investigation.

### ACKNOWLEDGMENTS

The authors acknowledge their gratitude to the trail running and mountain biking athletes, as well as the event organizers for their support in the study.

### CONFLICT OF INTEREST NOTIFICATION

The authors declare there are no conflicts of interest.

### COPYRIGHT

Published under the [Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License](https://creativecommons.org/licenses/by-nc-nd/3.0/).

### REFERENCES

1. Shroff FM, Sahota IS. The perspectives of educators, regulators and funders of massage therapy on the state of the profession in British Columbia, Canada. *Chiropr Man Ther*. 2013;21(1):2.
2. Best TM, Hunter R, Wilcox A, Haq F. Effectiveness of sports massage for recovery of skeletal muscle from strenuous exercise. *Clin J Sport Med*. 2008;18(5):446–460.
3. Verhoef MJ, Page SA. Physicians' perspectives on massage therapy. *Can Fam Physician*. 1998;44:1018–1024.
4. Weerapong P, Hume PA, Kolt GS. The mechanisms of massage and effects on performance, muscle recovery and injury prevention. *Sports Med*. 2005;35(3):235–256.
5. Dinsdale N. Evidence-based massage part 2. *Sport Exerc Dynam*. 2010;23(2):10–13.
6. Salvary C. Sports massage: sport for persons with a disability. *Perspectives*. 2007;7(1):1–24.
7. Crowther F, Sealey R, Crowe M, Edwards A, Halson S. Team sport athletes' perceptions and use of recovery strategies: a mixed-methods survey study. *BMC Sport Sci Med Rehabil*. 2017;9(1):6.

8. UK Essays. Perceived effectiveness of sport massage therapy. November 2018. Available from: <https://www.ukessays.com/dissertation/examples/sports/sports-massage.php>. Accessed April 18, 2018.
9. Moraska A. Sports massage: a comprehensive review. *J Sports Med Phys Fitness*. 2005;45:370–380.
10. Resnick PB, Jurch S, Ribeiro C. Sports massage: injury and recovery. *Massage Ther J*. 2017;56(3):46–76.
11. Preyde M. Effectiveness of massage therapy for subacute low-back pain: a randomized controlled trial. *Can Med Assoc J*. 2000;162(13):1815–1820.
12. Portillo-Soto A, Eberman LE, Demchak TJ, Peebles C. Comparison of blood flow changes with soft tissue mobilization and massage therapy. *J Alt Complement Med*. 2014;20(12):932–936.
13. Hemmings BJ. Physiological, psychological and performance effects of massage therapy in sport: A review of the literature. *Physical Ther Sport*. 2001;2(4):165–170.
14. Kargarfard M, Lam ETC, Shariat A, Shaw I, Shaw BS, Tamrin SBM. Efficacy of massage on muscle soreness, perceived recovery, physiological restoration and physical performance in male bodybuilders. *J Sport Sci*. 2016;34(10):959–965.
15. Gasibat Q, Suwehli W. Determining the benefits of massage mechanisms: a review of literature. *Rehabil Sci*. 2017;2(3):58–67.
16. Delextrat A, Calleja-González J, Hippocrate A, Clarke ND. Effects of sports massage and intermittent cold-water immersion on recovery from matches by basketball players. *J Sport Sci*. 2013;31(1):11–19.
17. Moran RN, Huath JM, Rabena R. The effect of massage on acceleration and sprint performance in track and field athletes. *Complement Ther Clin Pract*. 2018;30:1–5.
18. Leivadi S, Hernandez-Reif M, Field T, O'Rourke M, D'Arienzo S, Lewis D, et al. Massage therapy and relaxation effects on university dance students. *J Dance Med Sci*. 1999;3(3):108–112.
19. Furlan AD, Yazdi F, Tsertsvadze A, Gross A, Van Tulder M, Santaguida L, et al. Complementary and alternative therapies for back pain II. *Evid Reports/ Technol Assessm*. 2010;194:1–764.
20. McEwen S. Social work in health care when conventional meets complementary: nonspecific back pain and massage therapy. *Health Soc Work*. 2014;40(1):19–25.
21. Smith D, Carter S. New Zealand elite rugby union players' utilization of massage therapy [abstract]. Poster session at the 2017 American Massage Therapy Association Convention, 14–16 Sept, Pasadena, CA. *Int J Therapeutic Massage Bodywork*. 2017;10(4):1–11.
22. Jooste K, Khumalo V, Maritz J. Sportmen's experiences at a somatology clinic receiving a sport massage. *Health SA (online)*. 2013;18(1):9.
23. Hemmings B, Smith M, Graydon J, Dyson R. Effects of massage on physiological restoration, perceived recovery, and repeated sports performance. *Br J Sport Med*. 2000;34(2):109–114.
24. Kaada B, Torsteinbo O. Vasoactive intestinal polypeptides in connective tissue massage. With a note on VIP in heat pack treatment. *Gen Pharmacol*. 1987;18(4):379–384.
25. Cieślak B, Podsiadły I, Kuczynski M, Ostrowska B. The effect of a single massage based on the tensegrity principle on postural stability in young women. *J Back Musculoskelet*. 2017;30(6):1197–1202.

**Corresponding author:** Lloyd Leach, PhD, Department of Sport Recreation and Exercise Science, Faculty of Community and Health Sciences, University of the Western Cape (UWC), Robert Sobukwe Road, Private Bag X17, Bellville, Cape Town 7535, South Africa

**E-mail:** lleach@uwc.ac.za

## APPENDICES

**Appendix A: Knowledge (K) and Perception (P) of Sport Massage Therapy Questionnaire**

Instructions: Tick the appropriate box(es) for each of the questions. The questionnaire should take you about 10–15 minutes to complete.

1. Would you recommend sport massage for athletes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	P
2. Do you find sport massage useful?	<input type="checkbox"/> Yes <input type="checkbox"/> No	P
3. Where did you find out about sport massage?	<input type="checkbox"/> At an event <input type="checkbox"/> Internet <input type="checkbox"/> Friends / family <input type="checkbox"/> Other	K
4. Is sport massage a valuable method for resolving a wide variety of muscle problems?	<input type="checkbox"/> Yes <input type="checkbox"/> No	P
5. Can sport massage be seen as a form of injury prevention?	<input type="checkbox"/> Yes <input type="checkbox"/> No	P
6. Is a strong relationship important between the client and the massage therapist?	<input type="checkbox"/> Yes <input type="checkbox"/> No	P
7. Does sport massage improve quality of life?	<input type="checkbox"/> Yes <input type="checkbox"/> No	P
8. Does sport massage make you feel temporarily better?	<input type="checkbox"/> Yes <input type="checkbox"/> No	K
9. How often do you receive sport massage?	<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Only at events <input type="checkbox"/> Other	K
10. I enjoy receiving sport massage?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	K
11. Sport massage increases muscle strength?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	K
12. Sport massage makes me feel relaxed?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	K
13. Sport massage helps increase blood flow?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	P
14. Sport massage is cost-effective?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	P
15. Sport massage can improve flexibility?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	P

SCHILZ: ATHLETES' KNOWLEDGE OF SMT

16. Sport massage helps decrease muscle fatigue?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	P
17. My family and/or friends know the benefits of sport massage?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree	P
18. What are the three (3) main sport massage techniques?	<input type="checkbox"/> Effleurage <input type="checkbox"/> Gliding <input type="checkbox"/> Petrissage <input type="checkbox"/> Stripping <input type="checkbox"/> Tapotement	K
19. Which body region is usually massaged?	<input type="checkbox"/> Full back <input type="checkbox"/> Glutes <input type="checkbox"/> Lower back <input type="checkbox"/> Thighs <input type="checkbox"/> Hamstrings and calves	K
20. What is your perception of sport massage?	<input type="checkbox"/> Relieves Pain <input type="checkbox"/> Reduces muscle stiffness <input type="checkbox"/> Reduces muscle cramps <input type="checkbox"/> Decreases recovery time <input type="checkbox"/> Has psychological benefits <input type="checkbox"/> All of the above <input type="checkbox"/> None of the above	P
21. What is your attitude about sport massage?	<input type="checkbox"/> Positive <input type="checkbox"/> Don't know <input type="checkbox"/> Negative	P
22. According to you, what is the most important benefit of sport massage?	<input type="checkbox"/> Increases blood flow <input type="checkbox"/> Increases range of movement <input type="checkbox"/> Treats injury <input type="checkbox"/> Relieves pain and/or discomfort <input type="checkbox"/> Has psychological benefits <input type="checkbox"/> None of the above	K
23. Do you experience an increase in performance following sport massage?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Only temporarily <input type="checkbox"/> Don't know	P
24. In your opinion, for who is sport massage suitable?	<input type="checkbox"/> Only athletes <input type="checkbox"/> Athletes and nonathletes <input type="checkbox"/> Only adults <input type="checkbox"/> Any age <input type="checkbox"/> Other	P
25. How do you usually feel after receiving sport massage?	<input type="checkbox"/> Relaxed <input type="checkbox"/> Sore <input type="checkbox"/> Immediately relieved <input type="checkbox"/> Other	P
26. What is the difference between a sport massage therapist and a physiotherapist?	<input type="checkbox"/> There is no difference between the two professions <input type="checkbox"/> A massage therapist only works with uninjured athletes <input type="checkbox"/> A physiotherapist only works with injured athletes <input type="checkbox"/> Other	K