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THE EFFECTS OF SPORTING MASSAGE ON MOTIVATION AND SITUATIONAL ANXIETY IN FEMALE FOOTBALLERS

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ABSTRACT

This study was conducted to investigate the effect of sporting massage on motivation and situational anxiety in female footballers. The sample group used in the study consists of a total of 19 athletes between the ages of 18-25 randomly selected from healthy volunteer female athletes who actively play football in various clubs in Gaziantep province. The measurements were done at the end of the 2015-2016 football season, when training and matches ended, at an interval of 3 days. The athletes were not given any training or diet program. The Sports Motivation Scale and the Situational Anxiety Inventory were

used for psychological features. The SPSS 22.00 program was used for statistical analysis.

As a result of the study, it was concluded that the pre-exercise sporting massage increased the level of psychological stimulation and motivation and had a positive impact on situational anxiety. In conclusion, it is thought that massage + warmup routines for female footballers impact positively on psychological performances and will contribute to the work to be done in this field.

Key Words: Massage, Motivation, Situational Anxiety

INTRODUCTION

Massage consists of a sequence of manipulations with therapeutic, relaxing and calming properties. Massage dates back to ancient times and it has been used for long years. As well as having anatomical and physiological effects on the individual, its psychological effects are also too important to be ignored (Sehlikoglu 1986).

In general, massage is regarded as a method which can be applied by hand or a set of tools and which primarily has effects on skin and the muscle structure whereby mechanical stimuli are generated (Sengir 1989).

While massage is used for improving health, it is expressed as a set of rhythmic movements for preparing the organism for strenuous sports activities, psychological motivation and resting (Sökmen 1999).

Warmup activities in a sporting environment are performed to protect against sports injuries, to increase performance and to provide motivation (Kanbir 1998). Pre-exercise massage is an effective method that can be used to decrease the tension and increase motivation by contributing to the overall psychological well-being of athletes (Hazır 2001).

Massage also increases the efficiency of individuals by increasing their motivation to work. The sensation of relaxation after massage causes the individual to emit positive energy. The fact that it enables resting while providing stimulation shows that it has an important effect on the autonomous nervous system. Along with the hyperemia induced by massage in addition to its mechanical effects, it also causes footballers to calm before matches while stimulating more passive players. In this context, it's most important psychological impact can be considered as positive motivation and stress relief (Gürel & Dođdu 2014).

High levels of stress can occur in individuals due to various stimuli before matches. Massage at that point provides a variety of benefits in reducing and preventing stress (Güney 2001). In a study conducted on individuals with high aggression levels, it

was reported that a 20 minute long massage application caused the subjects to feel less anxious (Diego et al., 2002).

The most important benefit of massaging is that our body relaxes, rests and feels reinvigorated. Professional massage helps individuals overcome stress while providing a healthy rest (Güney 2001). Conversely, random massage applications performed unprofessionally can have psychologically adverse effects (Gürel & Doğdu 2014).

It is reported that massage reduces the level of anxiety, stress and depression. It is also emphasized that massage applications have positive effects on the treatment of post-traumatic stress, eating disorders, attention deficit, hyperactivity, depression, migraine, and backache (Shulman & Jones 1996).

On that basis, this study intends to find out whether sporting massage performed in addition to pre-exercise warm-up programs have psychological effects. Accordingly, the study sought answers to the following two questions:

Does pre-exercise sporting massage

1. Have an impact on sports motivation?
2. Does it have an impact on situational anxiety?

METHOD

This section explains the research method, the study group, data collection techniques and the statistical methods employed by the study.

The study strategy; The sample group used in the study consists of a total of 19 athletes between the ages of 18-25 randomly selected from healthy volunteer female athletes who actively play football in various clubs in Gaziantep province. The measurements were done at the end of the 2015-2016 football season, when training and matches ended, at an interval of 3 days. Athletes were not given any training or diet program. All subjects were informed about the work plan and purpose, and a written

confirmation was received from participants indicating that they voluntarily participated in the study.

Application Protocol; A total of three applications were made on the footballers. The first application involved no physical activity, the second application involved footballers doing 30 minutes of active warming up (flat racing, jumping, stretching) specific to football while the third application saw footballers receiving 10 minutes of sporting massage (by a researcher with a Sporting Massage Certificate) specific to football and doing 30 minutes of active warm up exercises for football and afterwards the scales were used.

Data Collection Tools

The Sports Motivation Scale, developed by Pelletier et al. (1995) and adapted to Turkish by Erdem (2008), consists of 28 items and 7 sub-sets. The Sports Motivation Scale is a valid and reliable scale developed on the basis of theories of cognitive interpretation and free will (Shaw et al., 2005). 3 subscales under the scale of internal motivation are internal motivations for knowing, succeeding and stimulation. The three subscales under the external motivation scale are external regulation, internalization and identification. The 7th subscale motiveless-ness is placed in a separate category. Concerning the internal consistency study, the scores obtained for subscales of motiveless-ness, external regulation, internal reflection, identification, stimulation, succeeding and knowing were .72, .65, .77, .79, .70, .81 and .80, respectively Erdem (2008).

The Anxiety Scale; The scale used to determine the situational anxiety levels of individuals while obtaining the research data is the situational anxiety scale developed in 1970 by Spielberger et al. and adapted to Turkish and tested in terms of reliability and validity by Öner and Le Compte (1985). The scale is made up of 20 items and has a 4 point Likert-type design. Alpha reliability is reported to range from .83 to .87, test-retest reliability from .71 to .86 and item reliability from .34 to .72 (Öner and Le Compte 1998, Aydemir and Köroğlu 2000). The total score obtained from the scale

ranges from 20 to 80. A high score indicates a high level of anxiety while a low score indicates a low level of anxiety.

Analysis of data; Statistical analysis of the data was performed using the SPSS package program (SPSS for Windows, version 22.0, SPSS Inc., Chicago, Illinois, USA). The data were presented as arithmetic mean, standard deviation, minimum and maximum values. The Shapiro-Wilk test was used for testing normality while the Levene test was used for testing homogeneity. The one-way variance analysis was used for analysis of the difference between measurements for repeated measurements and the post-Hoc LSD correction test was used to determine from which application the difference emanated. The statistical results were evaluated at $p < 0.05$ significance level.

RESULTS

Table 1 gives a comparison of the scores obtained by the study group from the sports motivation scale following the applications. There were differences in the Stimulant Internal Motivation for Living subscale, one of the subscales of internal motivation ($p < 0.05$). According to results from the LSD test to determine between which groups the difference is, the Massage + Warm-Up group was found to have a higher level of motivation than the control and warm-up group.

Table 1. A comparison of the scores obtained by the study group from the sports motivation scale following the applications

Subsets	Groups	N	Avg.	S.D.	F	p	Significant t Difference
Internal Motivation for Knowing	1.Control App.	19	5.81	1.31	1.118	.338	
	2.Warm-up App.	19	5.55	1.34			
	3. Massage + Warming-up App.	19	6.09	1.04			
Internal Motivation for Succeeding	1.Control App.	19	5.20	1.08	1.945	.158	
	2.Warm-up App.	19	5.49	.88			
	3. Massage + Warming-up App.	19	5.80	1.20			
Stimulant Internal Motivation for Living	1.Control App.	19	5.47	.89	14.605	.000	3-1
	2.Warm-up App.	19	5.08	.81			
	3. Massage + Warming-up App.	19	6.45	.64			3-2
External Regulation	1.Control App.	19	5.41	1.19	1.627	.211	
	2.Warm-up App.	19	5.22	1.31			
	3. Massage + Warming-up App.	19	5.88	1.16			
Identification	1.Control App.	19	5.97	.65	1.831	.175	
	2.Warm-up App.	19	5.55	1.16			
	3. Massage + Warming-up App.	19	5.96	.88			
Motiveless-ness	1.Control App.	19	2.24	1.19	1.230	.304	
	2.Warm-up App.	19	1.89	.918			
	3. Massage + Warming-up App.	19	1.83	.91			

Table 2. A comparison of the scores obtained by the study group from the situational anxiety scale following the applications

Application Groups	N	Avg.	S.D.	F	p	Significant Difference
1.Control App.	19	40.37	8.98			
2.Warm-up App.	19	42.47	8.97	8.919	.001	3-1
3. Massage + Warming-up App.	19	31.21	10.85			3-2

Table 2 gives a comparison of the scores obtained by the study group from the situational anxiety scale following the applications. There was a significant difference in the level of situational anxiety among the application groups ($p < 0.05$). According to results from the LSD test to determine between which groups the difference is, the Massage + Warm-Up group was found to have a lower level of situational anxiety than the control and warm-up group.

DISCUSSION AND CONCLUSION

Regarding the motivational levels determined using the sporting motivation scale, it was concluded that the massage and the warm-up group had higher levels of inner stimulant motivation for living than the control and the warm up group. Therefore, it can be said that warming up with massage contributes to athletes' self-motivation.

In a study by Elbir (2003), 72% of the subjects stated that pre-competition sports massage increased their pre-competition motivation. It was also determined that a majority of participants stated that their self-confidence increased, and that a large majority of the patients held the view that the massage had physiological as well as psychological effects and that it enabled them to feel comfortable and more conscious.

There are not many studies in the literature on its effects on motivation even though there are lots of studies on the psychological effects of massage (Brennan and DeBate 2006, Moyer et al. 2004, Elbir 2003, Cafferelli and Filint 1992, Field and Grizzle 1996, Sharper et al. 2007). However, it is stated that massage has a positive impact on motivation (Gürel & Dođdu 2014), and the findings obtained in our study support this view.

Regarding the situational anxiety factor, which we consider to be one of the most important factors affecting performance in the sports environment, it has been seen that the massage and the warm-up group application had lower levels of situational anxiety than the control and the warm-up group. Therefore, it can be said that the warm-up exercises, when combined with massage, are effective in decreasing the situational anxiety levels of athletes.

In a study on male footballers, it was reported that there was a significant decrease in situational anxiety scores in favor of the experiment group compared to the control group (Arslan 2004).

In a study conducted with physical education students, Caffarelli and Filint (1992) found that massage reduces the anxiety levels in a sporting environment.

In a study on elite volleyball players, 52% of the subjects reported having decreased levels of stress thanks to pre-exercise sporting massage while 76% of them reported having decreased levels of stress thanks to sports massage after exercise and all of the subjects participated in the study experienced psychological comfort (Elbir 2003). Again, in a study of 32 young mothers, it was reported that the massage application reduced the anxiety levels of the subjects (Field & Grizzle 1996).

Moyer et al. (2004) reported that regular massage therapy over a certain period of time was an important factor in reducing anxiety and depression levels.

Sharpe et al. (2007) reported that massage reduced the stress level of the subjects and alleviated their anxiety and depression levels.

In a study involving 82 nurses, Brannen and Debate (2006) found that there was a significant decrease in the stress levels of the nurses thanks to 10 minutes of massage between coffee breaks applied at an interval of 10 minutes.

As a result of this study which we have conducted to determine the psychological effects of sporting massage on female footballers, it has been found out that the addition of massaging to pre-exercise warm-up programs increased the psychologically stimulating motivation to live and had a positive impact on situational anxiety. In conclusion, it is thought that massage + warmup routines for female footballers impact positively on psychological performances and will contribute to the work to be done in this field.

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