

https://dspace.org/

The relationship between fibularis muscle strength and lateral ankle sprain among high school netball players in Gauteng northern region.

Phokontsi, Lesley

2011-10-19
http://hdl.handle.net/10539/10573

Downloaded from a DSpace repository. https://dspace.org/

THE RELATIONSHIP BETWEEN FIBULARIS MUSCLE STRENGTH AND LATERAL ANKLE SPRAIN AMONG HIGH SCHOOL NETBALL PLAYERS IN GAUTENG NORTHEN REGION

CHANGES AND COMMENTS AS PER RECOMMENDATIONS BY EXAMINER 2

Lesley Phokontsi

May 2011

Examiner 2			
Examiners comment	**Old page and paragraph**	**Changes made and/or comment**	**New Page and paragraph**
Key words are: Fibularis Muscle Strength, Relationship, Lateral Ankle Sprain.	Page three paragraph one	Added "Fibularis Muscle Strength, Relationship, Lateral Ankle Sprain as the key words and removed Ankle sprain, ankle/foot complex, ankle instability, ankle evaluation, recurrent ankle sprains, risk factors, epidemiology, foot biomechanics, fibularis muscles, netball, landing biomechanics, jumping, netball injuries from key words.	Page four line eight
Abstract : Rephrase the purpose of the study	Page iii paragraph one	Rephrased the purpose of the study to read as follows: Previous and current research findings contradict each other about whether a relationship exists between fibularis muscle strength and lateral ankle sprain. As it stands, there is no finality about the relationship between fibularis muscle strength and lateral ankle sprain. Hence, this study was aimed at establishing whether a relationship exists between Fibularis Muscle Strength and Lateral Ankle Sprain amongst high school net ball players in Gauteng Northern Region. If a relationship does exist and is well understood, further research may be recommended to come up with a	Page iii paragraph one

		rehabilitation protocol that may be used to prevent lateral ankle sprain	
Introduction: The background information should reflect the keywords of the study. It should be about the relationship between fibularis muscle and lateral ankle sprain. It is disjointed as it stands.	Page One to two. Paragraph one to four	The background information has been amended to reflect the keywords of the study which are : Relationship, Fibularis Muscle Strength and Lateral Ankle Sprain. Thus the background information has been amended to reflect on the relationship between Fibularis Muscle Strength and Lateral Ankle Sprain.	Page one to two.
Literature review: The review is not systematic and does not reflect understanding of concepts. It should reflect a critical stance to show the researcher's views.	Page Three to 12. paragraph one -31	The researcher ensured that the review is systematic by comparing the findings and conclusions drawn by different researchers and coming up with justifications why other researchers differed in their views. Concepts have been revisited and are now well understood particularly the mechanism of lateral ankle sprain. The researcher also took a critical stance to show his views. Several articles that were included in this review include: Kaminisky et al. 1999, Munn et al. 2003,Wikerson et al. 1997, Wright et al. 2000, Konradsen et al. 1997, Cordova and Ingersol 2003, Yavuz et al. 2003.	Page four to ten.

Methodology: The reasoning behind inclusion and exclusion criteria should be well defined. It is not clear why players who had previous ankle injuries were excluded from the study.	Page 14 and 15. Paragraphs two and three.	**Inclusion criteria** Female netball players who played at level A and/or B or who participated in at least one netball practice and /or match per week were included in the study because they were at high risk of sustaining lateral ankle sprain injury. In the researchers' opinion, being at high level of performance and frequently participating in matches and practices predisposed netball players to lateral ankle sprain injuries. NB: Level A/or B refers to teams at high level of performance i.e. members of teams who represented schools in competitions or tournaments. **Exclusion criteria** The researcher found it necessary to exclude players with previous history of lateral ankle sprain because: 1) In the researchers opinion, which is supported by Ekstrand and Tropp, (1990), those with previous ankle sprains were at higher	Page 13 Paragraph two Page 13 paragraph four

		risk for subsequent lateral ankle sprain injuries. Furthermore, Wright et al. (2000) explained that ankles with history of lateral ankle sprains had increased risk of recurrent lateral ankle sprains because of increased touchdown planta flexion angle. Wright et al.(2000) argued that the more the foot was plantar flexed at touchdown, the greater the incidence of excessive supination which may damage the ATF ligament because this ligament is loaded when the foot is plantar flexed and supinated. 2) In the researchers opinion, subjects with recurrent sprains are bound to have compromised muscle strength because they don't come at the same baseline data as the newly sprained ankles.Therefore including them may bias the study.	

Instruments: The researcher should review the literature on instruments that are commonly used to assess muscle strength and give reasons why he chose Hand Held Dynamometer instead of Isokinetics and other instruments. It is questionable as to why the researcher assessed isometric muscle strength instead of concentric or eccentric muscle strength.	Page 15 paragraph two	The literature has been reviewed and included in pages 14-15.	Page 14 and 15
Intra-rater reliability. How did the researcher test for intra-rater reliability?		In addressing the intra-rater reliability,: 1) The researcher ensured that he personally took the measurements as he has a lot of experience in using Hand Held Dynamometer the outcome of which would be consistency in taking measurements. The researcher has 8 years experience in using the digital Hand Held dynamometer in a sports clinic which managed sports injuries sustained by players from soccer, netball and rugby sport codes.	Page 19 paragraph two.

		2) In addition to personally taking the measurements, the researcher went on to take means of 3 readings when evaluating strength, weight, balance and height of the subjects. In the researcher opinion, this enhanced the intra rater reliability. 3) Furthermore, a pilot study conducted by the researcher also went on to indicate that there was no statistical difference between the first second and third readings of measurements relating to muscle strength, weight and balance.	
Why were variables not tested at the end of the session as well?	Page 16 paragraph one	Variables were only tested before the beginning of the season and not at the end of the season as well because the interest of this study was in knowing the status of the Fibularis muscle strength before the injury occurs and then check if the injury was associated with the status of the Fibularis muscles. Therefore, in the researcher's opinion, only baseline measurements of independent variables were	

		worth looking at. Taking measurements after the season would have had no bearing on the objectives of the study.	
In summary the methodology should be: • Clearly stated • Should have full description of all tools and protocols • Should have balanced methodological defence of the tools and methods chosen		In summary, the researcher ensured that the methodology was clearly stated, had full description of all tools and protocols and balanced methodological defence of tools and methods chosen.	
Results: Chapter four should present data for all subjects before comparison can be made. Would comparison between five and 95 subjects skew any results?	Page 21-24 Page 19 Paragraph two	Data was presented for all subjects before comparison could be made. The first part of the results section was descriptive and the second part was analytical. Comparison between five and 95 subjects could skew the results. To minimise such, the researcher interpreted the Wilcoxon's ranksum test which took into consideration the possibility that the outcome could change due to the fact that the sprain group was small (N=5).	Page 20-30 . Page 19 Paragraph two

Discussion Prevalence: This study tested subjects that did not have any ankle injuries or instability whereas other studies for instance Pintsaar et al.(1996) tested subjects who had ankle instability, this might have implications on the interpretation of results. The relationship between demographic characteristics and lateral ankle sprain:		The prevalence in this study and other studies quoted is not on testing the muscle but on the occurrence of the sprain.	
The age difference of players that sustained ankle sprains and that did not is three years and the mean age is 1.68. Would this age difference have a lot of effect in terms of susceptibility to ankle sprain?	Page 22, Paragraph one.	As shown in Table 4.7, the results of this study showed that the difference in mean age of players that sustained lateral ankle sprain and that did not was 1.68 years and was statistically significant (p=0.022) and further, the logistic regression showed further statistical significance(OR=6.46). As evidenced by figure 4.5, 60 % (i.e three out of five) sprains that occurred in this study came from the 19 years old category. In the researcher's conclusion of older	page 27

		players being 6.5 times more likely to sustain lateral ankle sprain and this is in keeping with the findings by Ostenburg and Roos, (2000) and Stevenson et al, (2000), the older the subject the higher the risk for sustaining lateral ankle sprain.	
Discussion Discussion reflects analyses on how the results compare to the rest of the literature reviewed.		The discussion was amended to reflect on the analyses on how the results compared to the rest of the literature reviewed.	Page 31-35.
The studies that were used are based mainly on previous ankle injuries and this was an exclusion criterion for this study. Limitations and weaknesses of this study are not well reflected.	Page 29. Paragraph two.	Please refer to page 32 paragraph one Please refer to page 37 paragraph two	Page 32 paragraph one Page 37, paragraph two
Conclusions and recommendations		Please refer to page 36 (paragraph three) and page 37(paragraph one and three)	Page 36(paragraph three) and Page 37 (paragraphs one and three)