

# ASSESSMENT OF ANKLE JOINT PROPRIOCEPTION IN YOUNG FOOTBALL PLAYERS WITH FUNCTIONAL ANKLE INSTABILITY

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## Introduction

The term Functional Ankle Instability (FAI) is defined as the giving-way sensation, weakness, more pain, or loss of function at the ankle than before injury. It has been suggested that closed kinetic chain and weight bearing proprioception evaluation may detect proprioception deficits in subject with FAI more accurately. In studies that have conducted in context of ankle Joint Position Sense (JPS), contradictory results have been observed as any, low or high proprioception deficits in injured ankle. The aim of the present study were to compare both within-groups and between-groups ankle JPS.

## Methods

Using an adjustable slope-box, JPS of injured ankle compared with intact ankle of 18 young football players with FAI (23.5±2.5 yrs) and with matched leg of 18 healthy football player (24.8±3.6 yrs).

## Results & Discussion

The mean absolute errors of angle estimation on slope-box in plantarflexion (PF), dorsiflexion (DF), inversion (IN) and eversion (EV) positions of ankle were significantly greater in comparison to the unaffected side in football players with FAI (p<0.01) and matched leg of healthy athletes (p<0.001). Also a statistically significant difference was found among the four ankle positions (PF, DF, IN & EV) in Mean Absolute Estimate Errors (MAEE) of injured ankle (p<0.01). MAEE of injured ankles in inversion position were significantly greater than dorsi-flexion and eversion positions.

Table 1. Difference between Joint Position Sense of injured ankles in football players having FAI and healthy athletes

Direction	Mean Absolute Estimate Error (degree)		t	sig
	Injured ankle	Uninjured ankle		
<b>Eversion</b>	3.83±1.32	1.80±0.36	5.71	0.000*
<b>Inversion</b>	5.02±0.81	1.83±0.48	11.61	0.000*
<b>Dorsi flexion</b>	3.48±0.96	1.80±0.31	4.75	0.000*
<b>Plantar flexion</b>	4.2±0.8	1.76±0.39	10.38	0.000*

\* indicates p < 0.001.

## Conclusions

The young football players with FAI had the deficit of JPS in affected side in comparison with intact side and healthy subjects. Inversion Position has higher amount of proprioception impairment than other ankle positions.

## References

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