Sports Physiotherapy

Prevalence of Generalized Joint Laxity among Multisport Young Male Arab Athletes and its Relation with Musculoskeletal Disorders

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AIM

➢The aim of the current study was to determine the prevalence of GJL among Multisport young male Arab athletes and its relation with musculoskeletal disorders .

BACKGROUND

➢The term of joint mobility has been described as “the joints are unduly lax and the range of motion is in excess of the accepted normal in most of the joints examination “(Kirk and Ansell 1967).

➢An assessment method was initially implemented in 1964 for joint mobility (Carter and Wilson), developed in 1969 (Beighton and Horan) and modified In 1973 (Beighton, Solomon and Soskolne).

➢Evidence that there are differences between races and sexes exist (R Grahame 1990).

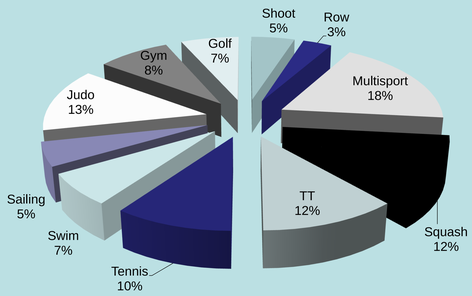
➢Previous authors have reported that GJL is associated with musculoskeletal complaints (Kirk and Ansell 1967). Also, excessive GJL and knee joint laxity increased risk of injury (R Smith 2005, Gregory D 2008) as well as the injury rate (D R Stewart 2004).

METHODS

Participants

➢60 male multisport athletes age14.1±1.3 y, from ASPIRE Academy for Sports Excellence, Qatar, participated in this study.

Subjects distribution by Sport



METHODS

Study Design

➢Multisport athletes were screened for GJL over a 15 months period. Musculoskeletal disorders and injuries were reported during this period. The results were analyzed and compared. The composite scores placed into 1 of 3 categories: scores 0 to 2 (tight joint), 3 to 4 (hypermobility) and 5 to 9 (excessive hypermobility).

Measurements

➢The objective measurement of GJL was documented by using Beighton and Horan Joint Mobility Index (BHJMI). A total score of ≥ 4/9 was considered positive. Patients were given 0 to 9, one point being given for the ability of doing each of the five tests.

Description of BHJMI

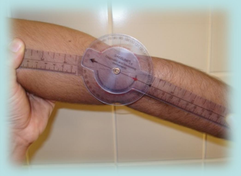
➢All tests were performed bilaterally, except for trunk flexion. For the 5 components, each positive test marks 1 point for a numerical score of 0 to 9. To measure the degrees of joint mobility, we used respectively, 8 inch and 12 inch goniometer.

Fifth Finger Extension

Wrist Flexion and Thumb Opposition

Knee Extension

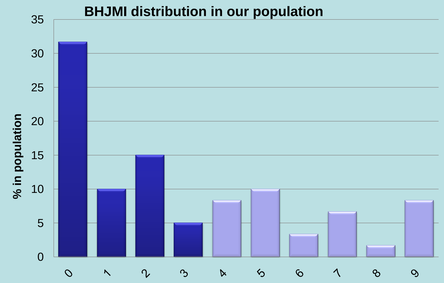
Elbow Extension

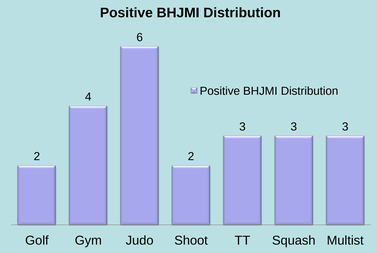


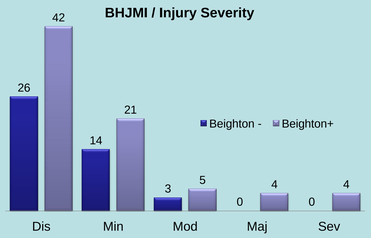
Trunk and Hip Flexion

RESULTS

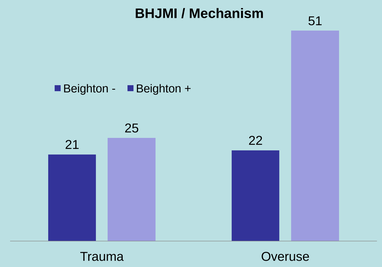
➢ The analysis of the BHJMI revealed an overall GJL prevalence of 38% with a score of 2.9 ± 2.9 and Judo had a 26% of the subjects with positive results. Overuse was the leading mechanism of injuries within the population; although a clear lead was for positive subjects (43 vs 76) overall injuries. There was a non significant difference for athletes to have trauma injuries (45.7 % vs 54.3 %) and a clearly significant difference to have overuse injuries (30.1 % vs 69.9 %) between negative and positive BHJMI subjects. A clearly significant difference between athletes with negative and positive BHJMI for disorder grading with zero days of absence (26 vs 42) and for minor injuries from 0 to 3 days of absence (14 vs 21)**.**







RESULTS



CONCLUSIONS

- The study suggests that GJL had direct relation with musculoskeletal disorders in multisport young male Arab athletes and with sport discontinuity.
- The association between GJL and subsequent development of musculoskeletal disorders appears to be of considerable importance with regard to preventive measures to predict future performance.
- Specific and standardized musculoskeletal screening procedures should be adopted and athletes with positive BHJMI should be oriented to low risk sports.
- These explanations could be clarified through prospective follow-up and the current study gives us a platform of baseline data for these purposes.

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