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NATIONAL TEAMS WORLD TOURNAMENT PERFORMANCE IS POSITIVELY INFLUENCED BY LOWER INJURY BURDEN IN INTERNATIONAL CRICKET OVER THE 1-YEAR PRIOR TO TOURNAMENT

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Background Cricket is one of the world's major team sports & injuries are common, especially for pace bowlers. Previous research has demonstrated an inverse relationship between injury burden and success in other sports. However there is limited research looking at the impact that injury burden might have on national team players preparation towards tournaments, and subsequent success in major world cricket championships.

Objective To investigate the impact that players training or game unavailability due to injuries or illness over 12 months leading towards world tournaments has on national teams results.

Design Prospective epidemiological study utilising various media & team reports to record the days players unavailable for full training and international matches due to injuries, over a 1-year period. Relationship between training days availability, international match selection availability and the results at a major international tournament was investigated. A Pearson's correlation coefficient analysis was performed.

Setting International cricket

Participants All national team selected players within the top 8 world ranked 'one day international' mens' cricket teams.

Main Outcome Measurements Injury prevalence and tournament results.

Results Over the 12 months 225 players were selected for national teams, 196 of these played 377 international matches. 113 players suffered a total of 218 time-lose (TL) injuries. Total TL injury prevalence was 9.2% of players unavailable for training. On average a player had 35.4 days of injury time-lose over the year, and teams had 1.70 players unavailable for selection per an international match due to injury. Lower injury burden, based on teams having lower number of training days missed due to injury ($r=0.44$, $p=0.045$) and higher player international match availability ($r=0.68$, $p<0.05$), over the 12 months leading up to a major international tournament was moderately & strongly positively correlated with higher tournament final standings respectively. Having lower total number of days of players out injured, was highly positively correlated with a difference between team's current world rankings to the team's final position at the tournament ($r=0.70$, $p<0.01$). A change in match unavailability average of 0.4 players resulted in one position change in final standings. Similar strong correlations was found when analysis was done on the injury burden of the team's top 5 ICC ranked batsmen & bowlers combined, and when including the entire player selection group even if they didn't play any international games over the year.

Conclusions National team players injury and illness burdens, and their influence on training and game availability, during 12-month preparation period is highly correlated with national teams results at major ICC world cricket

tournaments. Teams with lower injury & illness burdens may be better prepared for tournaments and perform better relative to their world ranking. However due to these results being based on a small number of teams & only one tournament these associations are not conclusive, further studies would be required.

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PROFILE OF INJURIES AND ILLNESS IN ELITE PAKISTAN CRICKETERS: A LONGITUDINAL INJURY SURVEILLANCE STUDY OVER A SEASON (52-WEEKS)

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Background Although cricket is the most popular sport in South Asia, there is a general lack of surveillance data from the region to provide a focus for injury prevention strategies.

Objective To establish first injury and illness profile of elite Pakistan cricketers.

Design Prospective cohort study (52 weeks)

Setting Pakistan men's cricket.

Participants Centrally contracted & national team male players.

Main Outcome Measurements Incidence, prevalence, locations and mechanisms of injuries & illness.

Results The mean age of 49 players was 28 years (± 6). 36 players sustained 414 injuries (57% new injuries). 43% players sustained ≥ 5 injuries, 31% injuries were acute. 20% were time-lose injuries and 60% occurred during matches. Match injury incidence was 210/1,000 player-days for all injuries, and 22.5/1,000 player-days for time-lose injuries. Match time-lose seasonal injury incidence was 86 injuries/100 players-per-year. Lumbar spine (16%), illness (11%) and lower leg injuries (10%) were most common; specifically lumbar spine discs & facet joints (14%) and calf muscle strains & cramping (8%). There were 46% joint and 27% muscle injuries. Most injuries occurred via a gradual onset (54%), with bowling (36%) the most common injury mechanism. The international match time-lose injury prevalence was 4.3%, whilst 10.5% for one-day cricket. General-time-loss injury prevalence was 5.6%; 6.5% for pace-blowers. International tours non time-lose injury prevalence was 39%. 81 time-lose injuries, led to 679 days (average 8 days/injury) time-loss; illness (22%) and lumbar spine injuries (15%) were the most common. Tendon's had most days-lost (303; average 25.3 days/injury), 96% from injuries within domestic cricket.

Conclusions This is the first study demonstrating that the injury profile is different in Pakistani cricketers with higher rates of lumbar spine, and burden of tendon injuries. Illnesses in cricket is not previously reported, however this demonstrated high burden from illnesses. More research is required to determine the causes of these differences, and to implement specific strategies to improve player health from the sub-continent.