

Editorial

Science and Medicine in Cricket: Where It began and Where are We Today?

The sport of cricket is believed to be in existence since the 15th century; international cricket matches are being played since 1844. The traditionally sedate game, however, has seen a dramatic increase in intensity and in quantity over the past four decades; introduction of new formats like T20 cricket and one day cricket have led to longer and exhaustive cricket seasons has increased the demands on the cricket player who has to be fitter, stronger and faster than ever! The game is now being played in more countries than ever, with the International Cricket Council (ICC) boasting of 105 affiliated member countries as of today.

Despite the rich history and the rapid development of the sport in the recent times, cricket has lagged behind other sports in embracing sports medicine, along with the use of science, in comparison with some other sports. Cricket, nevertheless, has always fascinated research scientists and medical practitioners; that the focus of research in sciences and medicine related to cricket has been steadily growing in the past few decades is reflected in the numerous research papers related to biomechanics of batting, bowling and fielding, injury prevention, physical training, psychological complexities and training, safety equipment, injuries, doping and the overall game in general.¹⁻⁹

This research work has had a tremendous impact on the game's growth and standards, and one can observe evolutionary changes in the game ranging from trivial to highly complex issues. Progress in biomechanics and motion analysis technology has led to advances in the investigation of the action of the human body during bowling, fielding and batting, believed to be unobtainable a few years ago. Bowling actions are being studied in greater detail and tailored to obtain maximum output with minimum energy expenditure; attempts are being made to focus on reduction of overuse injuries. Fielding standards are at an all-time high and seem to get better and better every year.

Injury prevention continues to be a prime area of research. Although injury prevention has increased by leaps and bounds from an era where cricket used to be played without helmets and sufficient protective gear, there is still scope for improvement in this sector to bring down a number of avoidable injuries and even death. The tragic death of Australian batsman Phillip Hughes (after being hit on the back of the head by a bouncer despite wearing a helmet) and former Indian Under-19 Captain Ankit Keshri on the cricket field due to cricket ball impact injuries goes on to show that lacunae still exist in injury prevention strategies employed in cricket; these events triggered massive debates across the world. Further research is needed to gain a greater understanding of the biomechanics of cricket actions, the mechanisms of resultant injuries and the role of various risk factors in injury causation. There is also a need for studies to evaluate the efficacy of various injury prevention strategies suggested in the literature.



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World Council of Science and Medicine in Cricket. From left: Craig Ranson, England; Mandeep Dhillon, India; Helen Bayne, South Africa; John Orchard, Australia; Ben Langley, England and Akshai Mansingh, West Indies

Many cricket-related professional bodies have put in place medical and scientific teams to address the various scientific issues related to the sport. The ICC has its own medical council, as do most national bodies of major cricketing nations like Board of Control for Cricket in India (BCCI), Cricket Australia, etc. The World Council of Science and Medicine in Cricket (WCSMC) is one such specialized body which has been actively promoting research work and scientific interactions between professionals in diverse fields related to cricket. Bringing under one umbrella doctors, physiotherapists, biomechanists, psychologists, coaches, nutritionists and many more, the WCSMC has conducted five World Congresses on Science and Medicine in Cricket, each one coinciding with a World Cup semifinal, and is held once in every 4 years. The WCSMC congress serves as a platform for eminent research scientists and medical practitioners from different scientific specialties to present latest developments in their specific specialties and to discuss various issues related to the sport. The brainchild of Dr Richard Stretch from South Africa, the WCSMC has now evolved into a cohesive and organized body, with representatives from the major test playing nations, and associates from all the cricketing world. This current issue is one such research brainchild, and many more research projects focussed on the game of cricket are in the pipeline. A major work in progress is the consensus statement on injury definitions, which is being led by John Orchard (Sports Physician), with inputs from representatives from all cricketing countries, to try and evolve the injury current definitions into those that are more representative and reproducible. Lets hope by the time of the next WCSMC congress in Cardiff with the 2019 World Cup (England and Wales), our knowledge of the science and medicine in cricket would have enhanced significantly due to the efforts of this core group.

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