THE EVALUATION OF A PRE-BATTING WARM UP ROUTINE ON BALL STRIKING PRECISION

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What is the problem and what is known about it so far?

Batsmen require enhanced visio-motor skills to anticipate where the ball will land and execute a series of movements based on this information which will result in a successful shot. It is largely acknowledged that batsmen are vulnerable when first getting to the crease and batsmen use a number of different modalities to 'warm-up' the visio-motor system. The efficacy of many of these warm-ups has not been established.

Why did the researchers do this particular study?

The researchers aimed to assess the ball striking precision of batsmen performing a standardised 5-10 minute visio-motor warm-up versus a 10 minute period spent watching a pre-recorded cricket game.

Who was studied?

Eighteen division 1 cricket batsmen between the ages of 18 and 36 were recruited for this study.

How was the study done?

Batsmen were required to visit the indoor biomechanics facility on 3 occasions. The batsmen were required to perform a physical warm-up prior to all 3 sessions. The initial session was a familiarisation session. The remaining 2 sessions consisted of a visio-motor warm-up followed by a batting performance evaluation and a pre-recorded match viewing followed by a batting performance evaluation. These 2 sessions were randomised. The batting performance evaluation consisted of the batsmen facing 60 balls (20 in-swingers (full length), 20 out-swingers (full length) and 20 short balls). The performance was recorded by high speed cameras from a front-on and side-on position and then later evaluated by a level 2 coach. Each stroke was evaluated on bat-ball contact and the direction of the ball post bat-ball contact following a modified protocol by Weissensteiner et al., (2011)[1].

The warm-up consisted of 2 ½ minutes tapping a cricket ball on the outside of their bat, 30 catches to the investigator off an underarm throw, and a further 2 ½ minutes tapping a cricket ball on the outside of their bat. This warm-up was evaluated against 10 minutes viewing a pre-recoded cricket game.

What did the researchers find?

When the batsmen participated in the visio-motor warm-up their performance in the batting test was considerably better than when watching the cricket video over the 60 ball evaluation.

All batsmen, irrespective of warm-up performed worse in the first 5 balls of all 3 delivery types confirming that batsmen are indeed vulnerable earlier in the innings. However, the batsmen all performed significantly worse on the first 5 balls after watching the cricket game compared to the visio-motor warm-up. All batsmen performed worse with the short ball.

What are the implications of the study?

There are significant benefits to ball striking precision following the short prescribed warm-up utilised in this study. The warm-up is quick, requires no additional equipment, can be conducted in a change room environment and can be easily repeated while a batsmen waits to go in to bat. A study is currently being conducted to evaluate the latency of the observed benefits of this type of warm-up.

1. Weissensteiner, J. R., Abernethy, B. & Farrow, D., 2011. Hitting a cricket ball: what components of the interceptive action are most linked to expertise?. Sports Biomechanics, pp. 324 – 338.

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