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

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J De Hahn1, MS Taliiep2, J Gray1,3
1. University of Cape Town, ESSM, Cape Town, South Africa
2. Department of Sport Management, Cape Peninsula University of Technology, Cape Town, South Africa
3. Cricket South Africa, Cape Town, South Africa

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).

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-recorded 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.