22nd annual ECSS Congress MetropolisRuhr/Germany, July 5-8 2017

# EFFECT OF CONSISTENT PREPARATION BEHAVIOR IN BASKETBALL FREE THROW

Nagata, N.

Keio University

Introduction
Pre-performance routines (PPRs) have been defined as “a sequence of task-relevant thoughts and actions which an athlete engages in systematically prior to his or her performance of a specific sports skill” (Moran, 1996). One of the purposes of PPRs according to Cohn (1990) is “preperformance routines would be to assist the athlete in selecting a motor program from similar stored responses and to define the specific parameters that will achieve the forthcoming motor response.” In the present study, this assistive effect of PPRs for athletes was examined in small groups.

Methods
The participants of this study were six male Japanese college basketball players (9.00±0.89 experimental years), whose percentage of shots made and shot hand movement were recorded. Shot movement was analyzed by a three-dimensional motion analysis system. Half of the participants took 20 shots each in two conditions: consistent preparation behavior (CPB) and no-preparation behavior (NPB). Others took 20 shots each in the CPB and random preparation behavior (RPB) conditions. We set a 1-minute rest interval between each trial.

Results
The percentages of successful free throws in each condition were 56.67±0.18%, 63.33±0.13%, and 39.76±0.22% for CPB, RPB, and NPB, respectively. In addition, coefficient variances of wrist and elbow angle in each condition were: CPB wrist vs. RPB wrist, 0.51±0.41% vs. 0.57±0.67%; CPB elbow vs. RPB elbow, 0.10±0.08% vs. 0.15±0.09%; CPB wrist vs. NPB elbow, 0.39±0.13% vs. 0.39±0.24%; and CPB elbow vs. RPB elbow, 0.12±0.06% vs. 0.13±0.09%.

Discussion
These results suggested that preparation behavior assists the players’ performances and supported the warm-up decrement hypothesis (Adams, 1961). Regarding the factor of difference in behavioral consistency, no differences existed among joint angles, and RPB had higher shot success than CPB. To interpret this result, individual data were analyzed in detail.

References
Adams JA. (1961). The second facet for forgetting: A review of warm-up decrement. Psychological Bulletin, 58, 257-273.
Cohn PJ. (1990). Preperformance Routines in Sport: Theoretical Support and Practical Applications. The Sport Psychologist, 4, 301-312.
Moran AP. (1996). The psychology of concentration in sport performers: A cognitive analysis. East Sussex, UK: Psychology Press.

Topic: Psychology

Presentation form: Mini-Oral

**European Database of Sport Science (EDSS)**

*Supported by SporTools GmbH*