Correlates of Team Performance in Volleyball

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Abstract

The overall performance of a Volleyball team depends on many factors, from which

decisive are considered to be the execution of skills that lead immediately to winning or

losing the rally. These are lost serves, aces, kill-attacks, attack errors and kill-blocks. The

analysis of these skills in relation to team performance, as expressed by the ratio of sets

won to the total number of sets, lead to the formation of two new correlates. These are the

serving efficiency ratio (SER), defined as the ratio of lost serves to aces, and the attack

efficiency ratio (AER), defined as the number of kill attacks divided by the sum of attack

errors and kill-blocks. Analysis of the data collected from all the matches of the male A1

volleyball professional league of 2005-2006 in Greece proved that the two efficiency

ratios were better predictors of the teams' overall performance than the five original

variables. The findings lead to clear-cut definitions of norms both for the serving and

attack efficiency ratio. The leading teams had a SER of around two and an AER of

around three. These criteria are valuable tools especially for Volleyball coaches in

deciding for the appropriate tactics of their teams.

Keywords: Volleyball, performance, serving efficiency ratio, attack efficiency ratio.