RELIABILITY AND VALIDITY OF A NEW TEST TO MEASURE THE COGNITIVE APTITUDES IN SPORT FOR YOUNG STUDENTS

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The aim of this study is to provide an instrument to measure the cognitive abilities in sport from a psychometric point of view. Once the reference frame to classify the abilities in sport is established (Riera, 2001; 2005), to define the cognitive ability construct (Buscà, 2005), and to review the most prominent research and instruments the aim of which is to evaluate the different psychological constructs related to cognition in sporting frames, this paper is meant to develop a test to evaluate the cognitive abilities in sport (TACS). In order to comprehensibly capture the varied conditions in sport, the influence of verbal reasoning in the shown items has been minimized. A number of 75 sporting situations corresponding to real cases have been described. Such situations cover the basic together with the technical and tactical skills. The items are shown in a very intuitive computerized application so as each subject of study can answer autonomously and at a pace of his own. For every single situation five answering options are presented one of them to be compulsorily chosen. After a pilot scheme on a selected sample (n=57) and the following analysis of the items and distractors is carried out, a number of 64 items were selected which, in the consolidated version of TACS, were fed to a sample of secondary students (n=242). From the second analysis of items, 56 items were consolidated which were used to set up an empirical study to determine the validity and reliability of the test. Reliability indicators were worked out with Cronbach’s 945; value (945;=.77) and a test-retest Pearson correlation (r=.72). Some validity criteria to content, to criteria and to construct were established. Reasonable signs to consider the test validity were set up by expert's opinion. Referred to criteria validity, a Pearson’s correlation between the TACS results and an external evaluation from the physical education teacher referred to technical and tactical skills of the students (r=.45; p<.01 and r=.41; p<.01 respectively) were found. Subsequently, were found significant differences in a mean comparison among subgroup samples. Finally, an exploratory and confirmatory factorial analysis reported two factors related to solving technical and tactical cognitive problems. Results are explained in relation to other processes of construction of psychometric tools in the sport area.

Keywords: Testing, Tactic, Cognition