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Development and validation of the coach's task presentation scale: A quantitative self-report instrument

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ABSTRACT

Objective: A major concern for coaches is the transmission of effective information in the moments before sport practice, when they communicate to players what they are supposed to do and how (Rink, 1994). The present study's main objective was to cover a gap in the sport psychology measurement field and to develop and validate a quantitative self-report instrument to measure the effectiveness of coaches' task presentation for athletes. The resulting instrument was the *Escala de Presentación de las Tareas por Parte del Entrenador (EPTE)* [Coach's Task Presentation Scale].
Design: The two studies developed to validate the EPTE used a cross-sectional research design.
Method: Participants in Study 1 included 830 college athletes aged between 18 and 27, who completed the EPTE. Participants in Study 2 included 677 college athletes aged between 17 and 29, who completed the EPTE and other questionnaires measuring coach's interpersonal style (autonomy support and controlling style) and basic psychological needs satisfaction/thwarting. Study 1 comprised translation, item formulation and examination of the reliability and factorial structure of the EPTE. Study 2 provided evidence of factorial validity and evidence of validity based on relationships with other variables in the context of the Self Determination Theory (Deci & Ryan, 2000).
Results: The results of reliability analysis and the different sources of validity provided, demonstrated the instrument's adequacy in terms of psychometric properties.
Conclusions: The EPTE is a valid, reliable scale that can be used to measure the effectiveness of task presentation by coaches, according to the perception of athletes.

For instructors, task presentation (Rink, 2010) or pre-practice information (Hodges & Franks, 2002) is the most important behavior in the teaching process. It is a key factor in teaching motor skills, a key ingredient in the recipe for success, and one of the key aspects of coaches' responsibilities in the initial stages of the instruction process (Hodges & Franks, 2002; Williams & Hodges, 2005). This is an essential phase focused on teaching athletes before they start engaging in the learning task (Williams & Hodges, 2005).

Task presentation is defined as an instructional event where the coach/instructor communicates to the players "what they are to do and how they are to do" (Rink, 1994). Task presentation is also known as the initial stages of the teaching process (Williams & Hodges, 2005) or structure before the activity (Haerens et al., 2013), and includes verbal instructions from the coach/instructor (e.g., explaining and presenting tasks) accompanied by nonverbal ones (e.g., demonstrating a movement technique).

In Physical Education instruction, the clarity of the verbal information provided by an instructor while presenting a motor task is considered a variable that predicts pedagogical effectiveness (Gusthart, Kelly, & Rink, 1997; Hall, Heidorn, & Welch, 2011; Landin, 1994; Rink, 1994; Rink & Werner, 1989). Likewise, early research on teaching has identified teacher clarity as one of the most consistent variables related to teacher effectiveness (Brophy & Good, 1986; Rosenshine & Stevens, 1986). In sports, from a behavioral

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perspective, the key to providing effective sports leadership is to focus on giving clear technical instructions (Smoll & Smith, 2001) and providing positive reinforcement (Curtis, Smith, & Smoll, 1979; Smith & Smoll, 2007); both are regarded as important aspects of effective leadership, not only in the sport context, but also in the physical education context (Hall et al., 2011).

Previous research examining effective task presentation skill has used an observational instrument called the Qualitative Measures of Teaching Performance Scale (QMTPS), a qualitative observational system developed by Rink and Werner (1989). The QMTPS evaluates seven categories of task presentation: clarity, demonstration, appropriate number of cues, accuracy of cues, qualitative cues provided, student responses appropriate to task focus, and teacher specific congruent feedback. An instructor's total QMTPS score captures one dimension: his/her skill or effectiveness at planning, presenting, and describing tasks to students. The QMTPS was validated for the physical education context, connecting an instructor's total score to his/her students' achievement levels in physical education, by assessing volleyball receiving and passing techniques (Gusthart et al., 1997). Several studies have used the QMTPS to qualitatively explore teachers' task presentation skills. In elementary schools, examples include physical education units on jumping and landing skills (Gusthart & Sprigings, 1989; Werner & Rink, 1989), on striking with a paddle, dance, volleyball, and soccer (Hall et al., 2011); and in secondary schools, on volleyball (Gusthart, Kelly, & Graham, 1995; Gusthart et al., 1997), soccer (Lee, 2011) and basketball units (Sau-Ching, 2001).

Observational and self-report methodological approaches enable us to examine and evaluate the coaching environment in different but complementary ways. However, there are no self-report instruments to measure the effectiveness of coaches' task presentation that represents the quality of the instruction in terms of its content (e.g., the information is accurate), the method in which that content is communicated (e.g., verbal cues and visual demonstrations) (Becker, 2009) and the coaches ability to communicate information on performance. For this reason, the development of a quantitative self-report instrument to measure effectiveness of coaches' task presentation would cover a gap in the sport psychology measurement field. Self-report questionnaires do not require excessive temporal and economical resources, permit access to bigger sample sizes (which would increase the strength of generalization of results), and provide data that can be easily coded, analyzed and benchmarked. As a result, a self-report questionnaire to measure task presentation would allow assessing the target variable quite often and systematically, providing a clear advantage for longitudinal studies or for intervention programs (e.g., to evaluate the evolution of task presentation in the expected direction). For these reasons, recognizing the merits and contribution of observational measures, we consider that a self-report questionnaire to measure the effectiveness of coaches' task presentation for athletes would be a complementary and valuable resource for the sport psychology/coaching behavior context.

The main purpose of the present study was to cover this gap in the sport psychology measurement field. The existing qualitative observational system (the Qualitative Measures of Teaching Performance Scale; QMTPS), was adapted into a quantitative self-report version called the Coach's Task Presentation Scale (EPTE from the Spanish *Escala de Presentación de las Tareas por parte del Entrenador*). This new version taps five of the QMTPS's seven categories: clarity, demonstration, appropriate number of cues, accuracy of cues, and qualitative cues provided. The category "student responses appropriate to task focus" was not included because it asks the athlete/student to self-report whether or not he/she completed the task in keeping with the teacher's instructions. The category "teacher specific congruent feedback" was left out as well, because this information provided during activity or after performance is considered as feedback (Williams & Hodges, 2005). Furthermore, there are existing questionnaires that measure this behavior in sport (i.e., Corrective Feedback Scale and Perceived Coaching Feedback Scale: Mouratidis, Lens, & Vansteenkiste, 2010; The Quality of Change-Oriented Feedback Scale: Carpentier & Mageau, 2013).

Structure is a dimension of social context that has been identified as predictor of athletes' well-being and ill-being (Deci & Ryan, 1991). A notable feature of structure is communication of clear and understandable guidelines and expectations for activity (Curran, Hill, & Niemiec, 2013; Reeve, 2009) to an athlete (Curran et al., 2013) that should help him/her to achieve the goal of different activities (Smith et al., 2015). Similarly, task presentation involves communicating (verbal and nonverbal) to the athletes the meaning and importance of what is to be learned; organizing players, space, equipment, and time for practice; and communicating the focus or intent of the practice (Rink, 1994). That allows us to associate structure with task presentation. For the reasons above, the present study conceptualizes task presentation as a specific aspect of structure before the activity.

Structure before the activity and structure during the activity are different construct, and previous studies have shown that both dimensions of structure are unrelated (Haerens et al., 2013). In developing the EPTE, we focused on structure before the activity and did not consider developing items to assess structure during an activity. As it has been stated, the information provided during activity is another stage of the teaching process (Williams & Hodges, 2005) and is one of the more frequently used feedback types (praise, instruction, instruction during performance, encouragement, criticism, confirmation/reinforcement) (Koka & Hein, 2003; Smith, Smoll, & Hunt, 1977). Furthermore, as it was mentioned above, there are self-report questionnaires that measure feedback behavior in sport (Carpentier & Mageau, 2013; Mouratidis et al., 2010).

There are also existing observational measures that include an assessment of structure before and during the class (Haerens et al., 2013; Smith et al., 2015), and that examine the links between observed structure and variables formulated in the SDT framework such as need satisfaction (Smith et al., 2015). Recently, Haerens et al. (2013) developed and provided initial validation for an observational system with four factors (autonomy support, structure before the activity, structure during the activity and relatedness support) to assess the motivational environment in physical education. This system can be used to assess the "Structure before the activity", which refers to the provision of giving clear guidelines and instructions, clarifying expectations, and providing demonstrations. The observational measure developed by Smith et al. (2015) measures the observed structure rated across the whole session. It is important to point out that there are clear differences between those instruments and the EPTE scale. The more evident is that the formers are observational systems and the EPTE is a self-report instrument. Regarding the measure developed by Smith et al. (2015), the EPTE do not tap the same construct, as it has been stated that structure before and structure during the learning process are different (Haerens et al., 2013). Additionally, the "Structure before the activity" factor from Haerens et al. (2013) instrument do not consider the coaches ability to communicate information on performance in a way that gives the athletes an accurate motor plan for performance, while this aspect has been specifically addressed in the EPTE (providing information about the appropriate number of cues, accuracy of cues and whether qualitative cues are provided). Further to this, Curran et al. (2013) consider that it is important for future research to develop a well-validated, sport specific measure of structure. In light of the