International Journal of Wrestling Science

ISSN: 2161-5667 (Print) 2161-3524 (Online) Journal homepage: http://www.tandfonline.com/loi/uijw20

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To cite this article: Tzioumakis Yannis, Michalopoulou Maria, Barbas Ioannis & Karamanis Emmanuel (2011) Perceived Coaching Behaviors in Wrestling, International Journal of Wrestling Science, 1:2, 54-58, DOI: 10.1080/21615667.2011.10878932

To link to this article: https://doi.org/10.1080/21615667.2011.10878932

Published online: 15 Oct 2014.

PERCEIVED COACHING BEHAVIORS IN WRESTLING

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ABSTRACT
The purpose of the present study was to determine the internal consistency and the reliability of the scales of Coaching Behavior Assessment System - Perceived Behavior Scale (CBAS-PBS) when using the Greek version (Gr-CBAS-PBS) with athletes and coaches in Greco-Roman wrestling. A secondary purpose was to determine the degree to which athletes' perceptions about their coaches' behaviors correlate with coaches' perceptions about their own behavior. Participants in this study were 105 male Greco-Roman wrestling athletes (*M* = 25.8, *SD* = 5,3 years) and their experience in competitive wrestling was 11.34 (SD = 5.68 years). Additionally, 21 male Greco-Roman wrestling coaches (M = 44.9, SD = 12.8 years) participated in this study and their experience in competitive wrestling was 14.9 (SD = 11.3 years). Analysis of data revealed that GR-CBAS-PBS items have good internal consistency (α = .86). Calculation of intraclass correlations using a 2-way random variable absolute agreement approach generated an average ICC (2,1) of .77 for athletes (ranging from .55 to .98) and of .70 for coaches (ranging from .55 to .91). Additionally, results revealed a strong correlation (r =.81, p>.01) between the coaches' perceptions of their own behaviors and athletes' perceptions of their coaches' behaviors. In conclusion the results of the study revealed moderate to substantial psychometric properties of the scale. Therefore, the scale could be used in the Greek wresting population to categorize perceptions of coaching behaviors.
KEY WORDS: CBAS-PBS, Greco - Roman wrestling, coaching behavior assessment, reliability

INTRODUCTION

The study of coaching behaviors and their effects of athletes has been extensively analyzed by researchers in the fields of sport science and physical education. High performance coaching is characterized by higher levels of commitment, more stable coach-athlete relationships and greater focus of medium to long term planning, monitoring decision making and management skills to facilitate control of performance variables when compared to participation coaching (8).

From a review of coaching behaviour studies, several behaviours have been identified which are related to positive psychosocial outcomes for players. Provision of positive reinforcement, technical instruction, and encouragement have been shown to be significant factors in player valence toward the coach (5, 14) as well as in players' perceived success, competitive preference for challenging activities, and perceptions of enjoyment and effort (1).

Even though several instruments aimed at measuring specific aspects of coaching effectiveness can be found in the literature CBAS (11); the Leadership Scale for Sports (***LSS***) (2), and the Coaching Behavior Questionnaire (CBQ) (19), their use in comprehensively evaluating coaches work remains limited (4). The CBAS is an instrument used in previous studies were systematic observation provided specific guidelines for coaches and coach educators about the coach – athlete environment in youth sport and the pedagogical strategies used in effective coaches (3,15). In addition, a questionnaire form of the CBAS was developed to assess the perceptions of coaches' behaviours (12). Smith and colleagues (1978) developed a player and a coach version of the scale respectively. Each item provided a verbal description of the respective CBAS behavioural dimension, in which players and coaches were asked to specify how frequently coaches exhibit each class of behavior as described in the systematic observation instrument. The three different sources of measurement (observers, players' perceptions, self-perceptions), is an effort for objective reflection of coaching behaviors. Previous studies performed in Greece have provided the adaptation of the CBAS for a Greek population and have provided high reliability readings (interobserver *k*=.79 and intraobserver agreement *k*=.81) when used to assess coaching behavior of youth basketball and handball coaches (16).

In the sport of Greco-Roman wrestling the work of the coach is a complex, multidisciplinary and creative pedagogical activity that includes the improvement of the wrestlers' psychological soundness, will power and the

stimulation of a diversity of tactical thinking on the mat (Kazarian, 2006). These personal characteristics will be exhibited by the wrestler during the wrestling combat that lasts for 6 min (3 x 2 min sessions and 2 x 30sec breaks). The coach starts working on the above elements from the first year of the athletes' involvement and both the personality traits and the pedagogical skills of the coach play an essential role in the training of psychology and will power of the wrestler. According to Kazarian (2010), the coach should among others pay great attention to the following pedagogical aspects: a) equal attitude to all the trainees and never show his positive or negative attitude to this or that trainees, irrespective of their physical, psychological, physiognomic characteristic features, b) study the behavior of each young wrestler like a parent, and educate their character and teach the desired behavior typical to wrestling in each of them, c) frequently encourage the trainees after they have carried out the task assigned by the coach, and d) analyze with the wrestler his own good performance: "Bravo, you performed it correctly. If you go on like that, you will become a great sportsman."

The purpose of the present study was to determine the internal consistency and the reliability of the scales of the Greek version of the CBAS Perceived Behavior Scale (Gr-CBAS-PBS) when used by athletes and coaches of Greco-Roman wrestling. A secondary purpose was to determine the degree to which athletes' perceptions about their coaches' behaviors correlate with coaches' perceptions about their own behavior

METHODS

The participants in this study were 105 male Greco-Roman Wrestling athletes that participated in the Men's National Greco-Roman Championship that took place in Athens in December of 2010.These athletes were members of 63 wrestling clubs in Greece. The athletes ranged in age from 19 to 43 years (*M* = 25.85, *SD* = 5,3 years) and their experience in competitive Wrestling ranged from 2 to 28 years (M = 11.34 SD = 5.68 years). Additionally, 21 male Greco-Roman Wrestling coaches (M = 44.9, SD = 12.8) participated in this study and their experience in competitive Wrestling ranged from 13 to 28 years (M = 14.9, SD = 11.3).

Athletes and coaches were contacted during the Men's National Greco-Roman Championship, in Athens in December of 2010. In total 250 athletes competed in the 3-day tournament and 105 of them completed the 12-item Gr-CBAS-PBS on the first day of the tournament. Finally, 76 of these athletes completed the Gr-CBAS-PBS for a second time 3 days later, during the final day of the tournament. Additionally, out of the 58 coaches that participated in the tournament 37 of them completed the12-item Gr-CBAS_PBS on the first day of the tournament. Finally 21 of these coaches completed the Gr-CBAS-PBS for a second time during the final day of the tournament.

INSTRUMENT

The 12-item CBAS-PBS, the definitional items of which consist of behavioural descriptions derived from the CBAS observer training manual (Smith et al., 1977b). A sample definitional item (mistake-contingent encouragement), derived from the CBAS training manual, is: "Sometimes players goof and make mistakes. Some coaches give their players support and encouragement after they make a mistake. For example they may say, 'That's OK, don't worry about it; you'll get 'em next time.' Other coaches don't give much encouragement after mistakes. Circle how often your coach encouraged you after you made mistakes." Athletes indicated how frequently their coaches engaged in each class of behaviour on a Likert scale ranging from 1 (never) to 7 (almost always).

DATA ANALYSIS

First, the CBAS-PBS' internal consistency was assessed using an item-total test approach. To this end, Cronbach's alpha was calculated. As the CBAS-PBS does not have subscales, the consistency of responses across the entire 12 items was assessed. In addition, an Intraclass Correlation Coefficient (ICC) has been employed to assess the reliability of the scales, separately for coaches and athletes. Coefficients were calculated to assess reliability, based on a one-way analysis of variance, along with 95% confidence intervals (CI), (Chelladurai & Riemer, 1988). Furthermore, correlational measures have been used for the comparison of the scores obtained separately by athletes and coaches.

RESULTS

Participants' responses were analyzed for the purpose of examining the scale's internal consistency. The items were normally distributed for both the test and retest data. The result from the test of internal consistency indicated that the CBAS-PBS items have good internal consistency (α= .86).

Calculation of intraclass correlations using a 2-way random variable absolute agreement approach generated an average ICC(2,1) of .77 for athletes (ranging from .55 to .98) and of .70 for coaches (ranging from .55 to .91). The

above ICC coefficients would suggest that the CBAS-PBS items examined possess acceptable test-retest stability (Vincent, 1999), suggesting that there were moderate to fairly strong positive relations between the responses initially collected and the retest responses for the CBAS-PBS items (Table 1).

Table 1: Test-retest reliability using intraclass correlation coefficients (ICC(2.1)) with 95% confidence intervals (CI)

Behavioral Categories	Athletes	coaches
	R(2,1)	*R(2,1)*
1. Positive Reinforcement	.98	.70
2. Non Reinforcement	.96	.84
3. Mistake-Contingent Encouragement	.94	.76
4. Mistake-Contingent Technical Instruction	.78	.65
5. Punishment	.83	.91
6. Punitive Technical Instruction	.80	.61
7. Ignoring Mistakes	.65	.65
8. Keeping Control	.69	.75
9. General Technical Instruction	.55	.61
10. General Encouragement	.72	.71
11. Organization	.67	.59
12. General Communication	.66	.59
Overall agreement	**.77**	**.70**

In addition, Pearson's correlation was conducted to examine the degree of congruence between coaches' perceptions of their own behaviors and athletes' perceptions of their coaches' behaviors. Results revealed high correlation (r=.81, p>.01) between the two sets of scores (Table 2).

Table 2: Athletes' and Coaches CBAS-PBS descriptive statistics

Behavioral Categories	**Athletes**		**Coaches**	
	M	*SD*	*M*	*SD*
1. Positive Reinforcement	5.55	1.46	5.65	.81
2. Non Reinforcement	2.65	1.38	5.65	.81
3. Mistake-Contingent Encouragement	5.18	1.49	5.42	1.40
4.Mistake-Contingent Technical Instruction	5.84	1.24	6.57	.60
5. Punishment	2.52	1.41	2.82	1.44
6. Punitive Technical Instruction	2.77	1.88	2.57	1.78
7. Ignoring Mistakes	2.57	1.43	2.55	1.14
8. Keeping Control	4.56	1.49	4.82	1.65
9. General Technical Instruction	5.54	1.10	5.72	1.20
10. General Encouragement	5.79	1.17	5.70	1.04
11. Organization	5.33	1.46	5.57	1.22
12. General Communication	5.04	1.38	5.15	1.33

DISCUSSION/CONCLUSIONS

The purpose of the present study was to examine the reliability of the Perceived Behavior Scale (CBAS-PBS) on a sample of Greek wrestling athletes and coaches. The results of the study revealed moderate to substantial psychometric properties of the scale. Therefore, the scale could be used in a Greek wresting population to categorize perceptions of coaching behaviors. In line with the aforementioned findings, Smoll and Smith (2006) using modern structural equation methods suggested that in absence of systematic behavioral measures like CBAS, CBAS-PBS constitutes a measure of acceptable reliability. Moreover, correlations between coaches' and athletes' scores were conducted to examine the degree of concurrence among coaches' and athletes' perceptions of coaching behaviors. Markedly, in contrast with previous research findings (12, 18) participant coaches seem to have an increased awareness of how often they behaved, as indicated by strong correlations between coaches' perceptions of their own behaviors and athletes' perception of their coaches' behaviors. This finding could be interpreted in the light of coaches' age and coaching experience (M age = 44.9, SD=12.8 years and M experience=14.9 years, SD=11.3). It should also noted that most of previous studies that employed CBAS or CBAS-PBS measures used youth coaches and not high performance or elite participants as in the present study. However, due to small sample size, further examination is needed.

Despite measurement issues, a tangible usefulness of the CBAS-PBS is its contribution to coach training since it is a means to increase coaches awareness about their behaviors in training and in matches. Most of the past research in this particular scientific field has shown that coaches are unaware of how often they behaved in various ways, as well as the consequences that their behaviors had on athletes (10). If the aim of a coaching education program is to cause a change in coaching behavior, then it is highly unlikely for these changes to occur without self-awareness.

Moreover, as the model proposed by Smith et al, (1978) suggests, there are limitations when the coaching behavior assessment is only obtained from a third-party (an actual observer), and that it is highly desirable to conduct studies that measure actual behavior, players' perceptions and self perceptions. Studies as such would provide us with data in a holistic approach concerning coaches' training.

PRACTICAL IMPLICATIONS / ADVICE FOR ATHLETES AND COACHES

The use of instruments of proven psychometric properties like the GR-CBAS-PBS would increase coaches' self-awareness, encourage coaches to take their athletes' perspective, acknowledge their feelings, which in turn it will hopefully contribute to the improvement of the coach-athlete relationship, thus resulting in better coach-athlete communication, in increased training quality and coaching guidance and presumably this will lead to the enhancement of athletes' performance.

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