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COACHING BEHAVIORS IN CANADIAN YOUTH SPORT

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ABSTRACT

The purpose of the study was to examine coaching behaviors based on youth sport context and coaching certification. Sixty-three coaches, equally divided among three coaching contexts in Canada, and with varying degrees of certification, each completed the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997). Results showed no significant interactions or main effects for context or possession of certification, which suggested that Canadian youth sport coaches exhibited similar perceived coaching behaviors regardless of context. These perceived behaviors were mostly positive, with high occurrences of training and instruction, positive feedback, and consideration behaviors. The perceived focus on positive and supportive coaching behaviors, regardless of the contextual stream or formal coaching education may help create environments that foster positive psychosocial development of youth sport athletes in Canada.

Keywords: Coaching Behaviors, Youth Sport, Canadian Contexts

INTRODUCTION

Coaches influence the youth sport experience through their goals, values, attitudes, and behaviors (Fraser-Thomas & Côté, 2009; Newin, Bloom, & Loughhead, 2008; Smith & Smoll, 2002). The degree of enjoyment experienced by youth and their desire to continue involvement in sport has largely been influenced by their coach (e.g., Fraser-Thomas, Côté, & Deakin, 2005; Smoll, Smith, Barnett, & Everett, 1993; Weiss & Williams, 2004). Appropriate

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coaching behaviors have been linked to higher self-esteem, higher competence, and longer involvement in sport (Amorose and Anderson-Butcher, 2007; Conroy & Coatsworth, 2006; Smith, Zane, Smoll, & Coppel, 1983). Coaching behavior has also been linked to several negative outcomes in youth sport, particularly athlete withdrawal (Weiss & Williams, 2004). In fact, as many as one-third of youth athletes do not participate in sport the following year (Weiss & Ferrer-Caja, 2002). Several reasons have been cited for sport withdrawal including disliking the coach (Hedstrom & Gould, 2004). Clearly, coaching in youth sport is a highly influential role, and can have a profound effect on the states and attributes of the participants, and subsequently, the individual and social benefits of sport. Given its importance, it is surprising that most coaches have limited awareness of their own coaching behaviors (Fraser-Thomas & Côté, 2009; Smith, Smoll, Curtis, & Hunt, 1978; Williams et al., 2003).

Various models have attempted to describe coaching behavior and its effects on athlete development, including the Mediation Model of Leadership (Smoll & Smith, 1989), the Multidimensional Model of Leadership (Chelladurai, 1990), the Coaching Model (Côté, Salmela, Trudel, Baria, & Russell, 1995), the Model of Great Coaching (Becker, 2009), and Horn's Model of Coaching Effectiveness (Horn, 2008). Though each model is unique, common themes include the impact of coaches' personal characteristics and contextual factors on coaching behavior. Personal characteristics include age, gender, psychological traits, and years of experience. Contextual factors include level of competition (i.e., recreational vs. competitive), practice or game settings, type of sport, and previous win/loss record. Horn suggested that personal characteristics interact with contextual factors and organizational climate to influence and form coaching behaviors.

The personal characteristics of coaches have been shown to affect coaching behaviors, including previous experience. For example, research has indicated that previous experience affected coaches' self-efficacy (i.e., coaching efficacy), which influenced coaches' behaviors (Feltz, Chase, Moritz, & Sullivan, 1999; Sullivan & Kent, 2003).

Gilbert and Trudel (2001) also examined the impact of experience on youth sport coach development and found that experiential learning was important to developing knowledge and behaviors as a coach. Although previous experience is only one example of a coaches' personal attributes, it appears to be an important characteristic that impacts coaching behaviors.

In addition to coaching characteristics, contextual factors, including culture, have also influenced coaches' behavior (e.g., Chelladurai, Imamura, Yamaguchi, Oimura, & Miyauchi, 1988; Duchesne, Bloom, & Sabiston, 2011; Ryska, Yin, Cooley, & Ginn, 1999; Solomon & Lobinger, 2011; Weinberg, Grove, & Jackson, 1992). More specifically, Weinberg et al. revealed differences between American and Australian coaches in their application and perceived efficiency of self-efficacy building strategies.

American coaches found that using difficult training situations and emphasizing anxiety as a sign of readiness to be more effective in building athletes' self-efficacy compared to Australian coaches. In a similar manner, Ryska et al. found differences in coaching strategies between Australian and American coaches. American coaches focused on strategies that facilitated task-related cohesion (e.g., increased attentiveness of each athlete's team responsibilities and cooperative team training), whereas Australian coaches focused on strategies that facilitated social cohesion (e.g., recognizing personal differences among athletes and gaining understanding of individuals). These studies suggest that culture is a contextual variable that affects coaching behaviors.

Coaching behaviors of the Multidimensional Model of Leadership are typically measured using the Revised Leadership Scale for Sport (RLSS; Zhang, Jensen, & Mann, 1997). The model contends that antecedent factors (situational, member, and leader characteristics)

influence three types of leadership behaviors: actual, preferred, and required behaviors (i.e., behaviors dictated by goals, structure, and norms of an organization).

The performance and satisfaction of members depend on the degree of congruence of the three aspects of leadership behaviors (Chelladurai, 1990). These behaviors include social support (i.e., the extent to which the coach satisfies the athletes' interpersonal needs), situation consideration (i.e., behaviors that consider factors such as time, individual, and environment), positive feedback (i.e., behaviors that express appreciation and contribution of the athletes' performances), and training and instruction (i.e., behaviors that help improve athletic performance).

Further, coaches' decision making is measured by two factors: democratic behaviors (i.e., the extent to which a coach permits athletes to participate in decision-making processes), and autocratic behaviors (i.e., the extent to which the coach stress his/her authority; Zhang et al., 1997).

In Canada, coach education is governed by the Canadian Association of Coaching (CAC) whose mission is to deliver the skills, knowledge, and attitudes needed to provide effective coaching (Bloom, 2011). The CAC created the National Coaching Certification Program (NCCP) in 1974 to train and certify coaches in over 60 sports. Previously, coaches were certified based on five levels of training, each with three courses. Theoretical courses involved general coaching principles applicable to all sports.

Technical courses involved specific techniques and strategies for each individual sport. Practical courses involved structured coaching placements before registration at the given level. Recently, the NCCP has been re-developed from a knowledge- and course-based approach to a competency-based program which focuses on the environment or context in which the coach is coaching (Bloom, 2011).

There are three youth sport coaching contexts in Canada: community, instructional, and competitive (Coaching Association of Canada, 2008). Community coaches focus on broadbased participation including both initiation and on-going participation in sport. These coaches are involved with athletes of varying ages ranging from children to adults. Instructional coaches work with athletes to develop skill proficiency in non-competitive environments in a variety of situations (i.e., beginner, intermediate, and advanced athletic contexts). Competitive coaches work with athletes to develop skills for use in regional, national, or international competitions in long-term situations (e.g., introductory, developmental, and high performance environments). Although youth sport has been repeatedly noted as a distinct context that may influence coaching behavior (Horn, 2008; Smoll & Smith, 1989), each Canadian youth sport coaching context (i.e., community, competitive, or instructional) may be a distinctive or separate contextual variable (Sullivan, Paquette, Holt, & Bloom, 2012).

Specifically, as each youth sport context receives different information in terms of level of competition and NCCP education, subsequent coaching knowledge should result in coaching behavioral differences. For example, community coaches receive information that teaches them how to create a fun, safe, and developmentally appropriate environment, instructional coaches receive information regarding the development of tactical and technical skills, and competitive coaches receive information regarding long-term athlete development and advanced knowledge regarding tactical, technical, physical, and psychological domains which should lead to performance excellence (Coaching Association of Canada, 2008).

This distinction is consistent with coaching research that distinguishes different aspects of coaching. For example, Lyle (1999) discussed coaching for participation compared to coaching for performance, and Chelladurai (2007) commented on coaching for participants' enjoyments as opposed to coaching to foster their excellence.

In terms of coach development, national coach education programs have been shown to be an important source of coaching knowledge. Lemyre, Trudel, and Durand-Bush (2007) examined coaching certification in Canada and found that first year youth sport head coaches sought out formal coaching education programs (i.e., NCCP in Canada).

Other national coaching education programs include the National Coaching Accreditation Scheme (NCAS) in Australia, the National Coaching Certificate (NCC) in the UK, and the American Sport Education Program (ASEP) in the United States. Many coaches found these programs helpful in developing their coaching knowledge.

Additional studies have revealed that coaching education programs in both Canada and the United States provided coaches of all levels of experience with important sources of coaching information (Vargas-Tonsing, 2007; Wiersma & Sherman, 2005; Wright, Trudel, & Culver, 2007). Although formal education programs are not the only source of coaching knowledge, these programs ensure the unified acquisition of coaching information (Lemyre et al., 2007). Although some research has found that coaches acquired information and knowledge through coach education courses, there is currently little research on the impact of coach education programs on coaching behaviors, and particularly on youth sport coaching behaviors. Studies have shown that national coaching education programs like the NCCP facilitated positive changes in coaches' beliefs in terms of coaching efficacy (Campbell & Sullivan, 2005; Lee, Malette, & Feltz, 2002; Malette & Feltz, 2000), and coaches' behaviors in terms of imagery use (Hall, Jedlic, Munroe-Chandler, & Hall, 2007), although none focused specifically on youth sport coaches.

Furthermore, participation in smaller-scale training programs (Cassidy, Potrac, & McKenzie, 2006; Newin et al., 2008) and university-based programs (Jones & Turner, 2006; Knowles, Gilbourne, Borrie, & Nevill, 2001) also positively influenced coaches' understanding and behaviors. The results of these studies revealed coaching education / training programs have positively affected coaching behaviors in terms of applying theoretical knowledge, communication skills, and reflective teaching practices. However, to the best of our knowledge, no studies have directly addressed the influence of a national coaching education program (i.e., the NCCP) on behaviors of youth sport coaches in Canada or elsewhere.

The present study was designed to investigate the differences in behaviors among community, instructional, and competitive youth sport coaches in Canada. The study also examined differences in coaching behaviors based on coaching certification. It was hypothesized that coaching behaviors would differ based on the specific youth sport context in which the coach was involved (Chelladurai, 2007; Côté et al., 1995; Gilbert, Gallimore, and Trudel, 2009; Horn, 2008). However, as coaching behaviors are considered bi-directional, there were no specific hypotheses a priori (c.f., Horn). It was further hypothesized that coaching behaviors would differ based on possession of coaching certification (i.e., NCCP; Hall et al., 2007). Since certified coaches should have previously acquired knowledge compared to coaches who did not complete formal coaching education programs, it was hypothesized that coaching behaviors would differ although again, due to the small amount of research in the field, no specific hypotheses were made a priori.

METHODOLOGY

Participants

The sample consisted of 63 participants, with 21 coaches equally represented in each context (community, competitive, and instructional). Participants were currently coaching

athletes who ranged in age from 8-18 and were playing a variety of team sports. Coaches self-reported their context. Demographic data (e.g., sex, age, and experience of the coach) were taken from the descriptive data questionnaire given at the beginning of the survey. This sample comprised 47 males and 16 females, ranging in age from 16 to 70 years ($M = 43.2$ years, $SD = 11.8$) and ranging in experience from 1 to 45 years ($M = 17.13$ years, $SD = 11.04$). Forty-six coaches were certified (15 instructional, 19 community, 12 competitive) and 17 were not (6 instructional, 2 community, 9 competitive); 12 participants completed NCCP Level 1, 13 completed NCCP Level 2, nine completed NCCP Level 3, nine completed certification other than the NCCP, and two failed to indicate their highest level of certification. One coach failed to indicate whether he/she possessed any coaching certification.

Previous research on coaching certification on a similar construct (i.e., coaching efficacy) has shown an effect size of .78 (Sullivan and Gee, 2008). Based on this effect size, with a p of .05 a sample size of 21 gives the present design acceptable power ($\beta = .75$; Cohen, 1987)

Instruments

Coaching behaviors were measured by Zhang et al.'s (1997) RLSS, through six subscales consisting of 60 items. All items were assessed on a 5-point Likert-type scale ranging from 1 (always) to 5 (never), and all items were preceded by the phrase, —In coaching, I. The training and instruction subscale was measured by 10 items (e.g., use a variety of drills for a practice). The autocratic behavior subscale was represented through 8 items (e.g., disregard athletes' fears and dissatisfactions).

The democratic behavior subscale was assessed by 12 items (e.g., ask for the opinion of the athletes on important matters before going ahead). The social support subscale was denoted by 8 items (e.g., remain sensitive to the needs of the athletes). The positive feedback subscale was measured through 12 items (e.g., encourages an athlete when the athlete makes mistakes). The situation consideration subscale was represented by 10 items (e.g., set goals that are compatible with the athletes' ability).

This version of the RLSS measured the coaches' self-perceptions of their behaviors, not actual coaching behaviors. Horn (2008) noted that measuring both actual and perceived coaching behaviors were valid forms of assessment which comprised distinct, but equally important constructs in the coaching process.

The RLSS has previously been used to study perceived coaching behaviors (e.g., Magnusen, 2010; Sullivan & Kent, 2003). The RLSS was used in the current study as it has provides subscales (i.e., situational consideration) which may be important to youth sport. The RLSS has been supported in terms of construct and face validity, internal consistency, and factor structure (see Table 1; Zhang et al., 1997).

Procedure

Following the approval of a university research ethics board, the RLSS was formatted for the online survey provider SurveyMonkey.com. The presidents of various youth sport organizations from two Canadian provinces were contacted with information about the present study. The presidents emailed an invitation to their coaches and those who responded favorably were contacted by the researchers and provided a link to the survey website. Participants provided consent via the internet site provider and were asked to first complete a demographic data questionnaire followed by the survey. Participation in the study was strictly voluntary.

Design

The present study consisted of a 3 x 2 between-subjects design. The independent variables were coaching context (community, instructional, and competitive) and coaching certification (certified vs. non-certified) and the dependent variables were the six factors of the RLSS (i.e., democratic behaviors, positive feedback, training and instruction, situation consideration, social support, autocratic behaviors).

Results

The assumptions required for multivariate analysis were checked for all six factors of the RLSS. The means, standard deviations, skewness, and kurtosis for each subscale are presented in Table 1. The positive feedback subscale showed moderate skewness and kurtosis, though transformation of data was not required. Multivariate outliers were checked using Mahalanobis distance calculations and no outliers were found at $p < .001$. Cronbach's alphas were calculated to check for internal consistency, with most variables showing alphas greater than Nunnally's (1970) criteria of .70. Autocratic behavior was the only variable with a calculated alpha of less than .70 (.52), and was removed from subsequent analyses.

Table 1. Descriptive Statistics for Coaching Behavior Subscales

Descriptive Statistic Measurement					
Subscale	Mean	Standard	Skewness	Kurtosis	Chronbach's
	De viation				α
Positive Feedback	1.47	.47	1.56	2.79	.87
Training and Instruction	1.60	.66	.86	1.16	.85
Situation Consideration	1.79	.44	.53	.94	.77
Social Support	2.47	.62	.36	-.37	.75
Democratic Behavior	2.73	.66	.86	1.16	.87
Autocratic Behavior	3.35	.48	-.64	.60	.52

Table 2 shows the correlation matrix for the factors of the RLSS. No issues of multicollinearity were found as all factor correlations were below .80 as suggested by Tabachnick and Fidell (2007). Years of coaching experience was not significantly correlated with any of the coaching behavior factors and was not subsequently calculated as a covariate.

Table 2. Correlation Matrix for Coaching Behavior Subscales

Subscales	1	2	3	4	5	6	7
1. Democratic Behavior	-.10	.10	.01	.15	.42**	.18	-.17
2. Positive Feedback		-.45**	.55**	.16	-.23	-.15	

3. Training and Instruction		-	.73**	.31*	-.02	-.23
4. Situation Consideration			-	.30*	-.43	-.22
5. Social Support				-	.19	-.24
6. Autocratic Behavior					-	-.05
7. Coaching Experience						-

Note: * $p < .05$. ** $p < .01$.

The results for the 3 (community, instructional, and competitive coaching contexts) x 2 (certified or not certified) factorial MANOVA, with coaching behaviors as the dependent variables, showed that Box's test of equality of covariance matrices was non-significant, revealing that coaching behavior variables were equal across groups. No significant interactions were found, $F(10, 106) = .38$. Furthermore, no significant main effects were found for coaching context, $F(10, 108) = 1.87$, or possession of certification, $F(5, 53) = .64$. These results revealed that perceived coaching behaviors were consistent despite the context of the sport or the possession of coaching certification for Canadian youth sport coaches.

DISCUSSION

The current study investigated the differences in coaching behaviors among the three new Canadian coaching contexts (competitive, instructional, and community) and between certified and non-certified youth sport coaches. The hypotheses that coaching behaviors would vary as a result of contextual differences or possession of coaching certification were not supported. It was found that perceived coaching behaviors did not significantly differ among youth sport coaches regardless of the situational context or certification. Despite this, both theoretical and practical recommendations can be drawn from the current results.

Our results allude to a unique contextual element when conceptualizing youth sport (i.e., Becker, 2009; Chelladurai, 1990; Côté et al., 1995; Horn, 2008; Smoll & Smith, 1989). The previous theories all contend that differences in coaching behaviors should arise based on cultural environments, team settings, or level of competition. However, our results showed that the situational and contextual characteristics of competitive, instructional, and community coaching contexts in Canada had no effect on coaches' perceived behaviors in youth sport. It is possible that these three contexts of youth sport were not separate but actually comprised one youth sport coaching context. This conclusion would be consistent with previous suggestions that youth sport be grouped under a unique sport context (Horn, 2008; Smoll & Smith 1989). Rather than rebuke existing coaching theories, this suggests that Canadian youth sport contexts may be encompassed within a distinct context of youth sport. Further research is needed to examine this suggestion.

In terms of coaching certification, previous research has shown that the attendance of formal coaching education programs resulted in changes in coaching behaviors (e.g., Hall et al., 2007) and attitudes (Campbell & Sullivan, 2005; Lee et al., 2002; Maleté & Feltz, 2000). However, the current findings suggested that perceptions of coaching behaviors did not significantly differ based on NCCP certification. One possible explanation was that alternative sources of coaching knowledge (e.g., previous playing experience, mentoring, and internet research) may be more influential on coaching behaviors than formal coaching

education programs. Previous research has suggested that the impact of formal education programs may be limited when compared to knowledge gained from informal learning sessions (Gilbert & Trudel, 2001; Jones, Armour, & Potrac, 2003; Lemyre et al., 2007; Wilson, Bloom, & Harvey, 2010). Specifically, coaching behaviors acquired through unmediated (e.g., observing other youth sport coaches) and internal (e.g., reflecting on coaching experiences) sources have been shown to be more influential than coaching behaviors acquired in mediated or formal learning environments (Werthner & Trudel, 2006). On average, the participants in our sample had coached for 17 years and their perceived coaching behaviors may have been influenced more by informal learning sources.

The results of the present study also suggested that both certified and non-certified coaches, in all contexts, used higher levels of supportive behaviors. Compared to other measured behaviors in the study, coaches perceived themselves as most often employing positive feedback, training and instruction, and situational consideration behaviors. In short, the youth sport coaches in the present study perceived themselves as using behaviors that focused on teaching proper athletic techniques, praising good performance, and considering individual circumstances. As a result, the use of positive reinforcement and encouragement behaviors has been found to create positive, sporting environments (Fraser-Thomas & Côté, 2006; Fraser-Thomas et al., 2005; Gould & Carson, 2011). Although the current study examined only the coaches' perceived behaviors, these perceptions offer distinct concepts that suggest important information for youth sport coaching (Horn, 2008). In sum, the results suggested that these coaches perceived themselves as employing supportive behaviors in youth sport despite context and certification.

One additional possibility to explain our results may be the recent reorganization of the CAC from a knowledge-based to a competency-based coach education program. The new NCCP model centers coaching education and training on specific contextual streams (i.e., community, instructional, and competitive). The NCCP has been transitioning to its new model over the past 10 years and there may not have been enough time to affect changes in coaching behaviors as a result of the new program. Perhaps if this study is replicated in the future, the effects of the new NCCP model would be evident and the differences in coaching behavior based on contextual coaching streams would result.

The findings of the present study offer some interesting practical implications for coaching youth sport. First, in spite of pragmatic restrictions (such as geographical isolation or financial reasons) or simply awaiting formal certification, youth sport coaches can develop higher levels of positive feedback, training and instruction, and situational consideration behaviors through informal or unmediated means. In addition, these behaviors occurred despite the context in which the youth athlete was enrolled, and helped create positive sport environments which can transfer into various life domains such as academics and occupation (Coatsworth & Conroy, 2009). Second, youth sport coaches may be not transferring knowledge from formal certification programs into behavioral practices.

As previously suggested, this could be a reflection of the previous knowledge-based NCCP programs. However, these results may indicate that coaches, who are exposed to the same material by the same instructor, will vary in the application of knowledge acquired in formal learning situations (Trudel, Gilbert, & Werthner, in press). Future studies should continue examine coaching behaviors as a result of formal and informal learning situations in various contextual environments.

Although the present study improved our understanding of coaching behaviors in Canadian youth sport contexts, with both certified and non-certified coaches, there are several limitations that need to be addressed. First, the present study included a small sample size, which was a result of the difficulty in finding purely instructional coaches. Second,

coaches self-reported their contexts and it is possible that they did not fully understand the differences among the three contexts. Future studies should address this limitation by ensuring that the coaches understand the differences among community, competitive, and instructional contexts. Lastly, the present study focused solely on the coaches' self-perceptions of their behaviors. Various theories have noted that the impact of the coaching process on athlete outcomes was mediated by the athletes' interpretations of the coaches' behaviors (Horn, 2008; Smith and Smoll, 2002). Future studies should also examine the athletes' perceptions of their certified and non-certified coaches' behaviors in the separate Canadian youth sport contexts.

In conclusion, the results of the present study showed that regardless of coaching context or certification, Canadian youth sport coaches exhibited similar perceived behaviors, with higher occurrences of positive feedback, training and instruction, and situational consideration behaviors. In other words, both certified and non-certified coaches perceived themselves as focused on developing positive and supportive youth sport environments regardless of whether the youth were enrolled in competitive or recreational contexts. As coaches in the present study perceived the use of positive and supportive behaviors, this focus may continue to aid the positive psychosocial development and growth of youth sport athletes regardless of the contextual stream they are enrolled in or the formal education level of their coaches. Despite these similarities, youth sport coaches are encouraged to attend formal education programs to gain knowledge of the athletes and to train specifically within their contextual stream.

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